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THE
ASIATIC SOCIETY OF BOMBAY
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ADMINISTRATION REPORT

OF THE

MUNICIPAL COMMISSIONER

FOR THE

CITY OF BOMBAY

FOR THE YEAR 1914-15.

VOLUME II.

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ANNUAL REPORT

OF

THE EXECUTIVE HEALTH OFFICER

FOR

1914.

12/10/30

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PUBLIC HEALTH.

Annual Report of the Executive Health Officer for 1914.

I have the honour to submit my 15th Annual Report on the Conditions and Administration of the Public Health of Bombay during 1914.

Public Health in 1900 and 1914: A Retrospect.

Before dealing, therefore, with the health conditions in 1914 and with a view to illustrating their present significance and their encouraging possibilities for the future, I would briefly review these conditions as they existed in 1900.

It would be difficult to imagine more appalling statistics of mortality than those of 1900. The principal infectious diseases (Plague, Small-pox, Cholera, Measles) were all prevalent in an epidemic form.

The mortality from Plague was as high as 13,285, with the death-rate from that disease alone of 16·16 per 1,000 of population. The mortality from other diseases was as follows:—Small-pox 3,018 (3·67), Cholera 4,273 (5·19), Measles 1,500 (1·82), Tuberculosis 8,657 (10·53).

The mortality from Fevers was 7,928; infant mortality 13,492 (1063·3).

The total mortality was 79,350, giving the death-rate of 96·56 per 1,000 of population.

The number of *live* births registered was 12,688 (15·43).

Never before in the history of the City had these diseases levied such a heavy toll, nor did they in the years that followed, with the solitary exception of Plague which reached its highest point in 1903, recording 20,788 deaths (26·78) before it could be brought under effective control.

It is not necessary to follow through subsequent years the history of these diseases, as it has been fully dealt with in the various Annual Reports. Suffice it to say that it is indicative of the steady and effective control under which the various diseases have in successive years been brought, so that while the population has increased, epidemics have been much less frequent; they have been marked also by a decreasing fatality, the general health conditions, in consequence of an enormous reduction in mortality, reflecting a steady and encouraging improvement, until these now bid fair to approximate more and more to the conditions of Western Cities.

There is still room for further improvement and there is a marked tendency in that direction, which should encourage those in charge of the sanitary administration of the City to insistently press on the attention of the Authorities the supreme urgency of those sanitary measures and reforms, which more immediately affect the physical condition of the people and their surroundings and are the basis of all lasting improvements in Public Health.

The extent of this improvement could best be gauged by comparing the vital statistics for 1914 with those for 1900—the year that has been taken as the starting point.

—	1900.		1914.	
	Number of Deaths.	Death-rate.	Number of Deaths.	Death-rate.
Plague	13,285	16·16	2,941	3·00
Small-pox...	3,018	3·67	252	·25
Cholera	4,273	5·19	221	·22
Measles	1,500	1·82	263	·26
All Fevers	7,928	9·64	2,877	2·93
Malaria (1903)	219	·37	213	·21
Tuberculosis	8,657	10·53	1,889	1·92
Respiratory Diseases	12,522	15·23	8,734	8·91
Infant Mortality	13,492	1,063·3* (Per 1,000 births registered).	7,580	385·1
Mortality of Children under 5 years	7,965	.....	3,775	.....
Total Mortality	79,350	96·56	31,853	32·52
No. of *live* births registered	12,688	15·43	19,679	20·09
No. of *still* births	2,062	.....	1,561	.....

* *Note.*—For an explanation, see pages 12 and 8.

The results of this retrospect are no less interesting than striking: but it is not intended to suggest, much less claim, that the improvement in Public Health, which the statistics for 1914 reveal, has been the exclusive achievement of the sanitary or administrative effort put forth by Health Department; or to deny that there have been any other agencies or influences, natural or human, which may have, in their own way or sphere, helped to contribute to the attainment of this position.

But, while making all reasonable allowances for such part as natural forces may have played in the reduction of the death-rate, from diseases supposed to be subject to natural variation or to cyclical circumstances; or for the agency of the City Improvement Trust in the removal of several insanitary spots in the City; and also the Sanitary Association in the dissemination of knowledge of sanitation and hygiene and amelioration of insanitary surroundings; it must be admitted that these alone, or in co-ordination, cannot completely explain the so far satisfactory position that has been reached.

Further, it must be conceded, that the efforts, educative and other, of the various branches, conservancy, sanitary and medical, of this Department, the measures it has adopted and the continuous supervision it has exercised, have had no mean share in controlling disease and effecting improvement in the physical environment of the people; on the other hand, it must be stated that enormous and encouraging as this improvement in the Public Health of the City has been, it is not so great as it could or should be; it is, however, sufficient to establish the efficiency and value of the sanitary measures that have in more recent years been pursued and stimulate the Authorities to persevere in their efforts with greater courage and confidence, and a wider out-look, because of a more assured sense of the possibilities of further improvement which, all things being favourable, should now be more rapid than in the past.

TABLE OF BIRTHS AND DEATHS REGISTERED FROM PRINCIPAL CAUSES DURING 1899—1914.

Year.	Births (excluding still-births).		Deaths from all causes (excluding still-births).		Plague.		Small-pox.		Cholera.		Malaria.		All fevers including Malaria.		Measles.		Tuberculosis.		Respiratory Diseases.		Infant Mortality.		Mortality of Children under 5 years.		Still-births.
	No. registered.	Rate per 1,000.	No. registered.	Rate per 1,000.	No. registered.	Rate per 1,000.	No. registered.	Rate per 1,000.	No. registered.	Rate per 1,000.	No. registered.	Rate per 1,000.	No. registered.	Rate per 1,000.	No. registered.	Rate per 1,000.	No. registered.	Rate per 1,000.	No. registered.	Rate per 1,000.	No. registered.	Per 1,000 of births registered.	No. registered.	Per cent. to Total Mortality.	
1899 ..	10,624	12.92	56,434	68.67	15,796	19.22	440	.53	111	.13			5,063	6.16	1,868	2.27	6,557	7.97	8,650	10.52	8,351	786.0	4,686	8.30	1,955
1900 ..	12,688	15.43	79,350	96.56	13,285	16.16	3,018	3.67	4,273	5.19			7,928	9.64	1,500	1.82	8,657	10.53	12,522	15.23	13,492	1063.3	7,965	10.03	2,062
1901 ..	13,520	17.42	59,495	76.66	18,736	24.14	159	.20	198	.25			7,921	10.20	67	.08	7,089	9.13	7,804	10.05	7,768	574.5	4,200	7.05	2,153
1902 ..	17,599	22.67	48,414	62.38	13,820	17.80	288	.37	75	.09			4,518	5.82	642	.82	4,595	5.92	7,250	9.34	9,553	542.8	3,890	8.03	2,017
1903 ..	16,375	21.10	50,513	65.09	20,788	26.78	1,477	1.90	17	.02	294	.37	2,500	3.22	1,115	1.43	3,475	4.47	7,101	9.15	8,718	532.3	4,087	8.09	1,818
1904 ..	19,556	25.20	42,676	54.99	13,538	17.44	568	.73	219	.28	270	.34	2,530	3.26	229	.29	3,548	4.57	7,339	9.45	8,981	459.2	3,274	7.66	2,033
1905 ..	19,141	24.66	47,762	61.54	14,198	18.29	2,161	2.78	26	.03	267	.34	2,878	3.70	620	.79	3,183	4.10	9,103	11.78	10,664	557.1	4,550	9.52	2,073
1906 ..	20,769	21.24	52,874	54.07	10,823	11.06	276	.28	1,241	1.26	190	.19	4,882	4.99	936	.95	4,052	4.14	11,731	11.99	11,106	534.7	5,314	10.05	2,193
1907 ..	19,535	19.97	38,687	39.56	6,389	6.53	86	.08	439	.44	149	.15	3,633	3.71	107	.10	3,440	3.51	9,022	9.22	8,276	423.6	3,670	9.48	1,830
1908 ..	20,166	20.62	38,271	39.13	5,361	5.48	1,026	1.04	95	.09	331	.33	3,403	3.48	653	.66	3,023	3.09	8,954	9.15	9,077	450.1	4,173	10.90	1,918
1909 ..	19,839	20.28	34,878	35.66	5,197	5.31	473	.48	727	.74	293	.29	2,800	2.86	75	.07	2,862	2.92	7,974	8.15	8,030	404.7	2,972	8.52	1,806
1910 ..	19,939	20.39	34,933	35.72	3,656	3.73	1,008	1.03	107	.10	293	.29	3,113	3.18	184	.18	2,839	2.90	8,212	8.39	8,253	413.9	4,001	11.45	1,568
1911 ..	21,376	21.82	34,961	35.69	4,006	4.09	443	.45	123	.12	334	.34	3,146	3.21	652	.66	2,694	2.75	8,640	8.82	8,120	379.8	4,227	12.09	1,759
1912 ..	21,518	21·96	38,954	39.77	1,717	1.75	979	.99	1,790	1.82	360	·36	3,585	3.66	210	.21	2,794	2.85	9,686	9.88	9,646	448.2	4,830	12.39	1,668
1913 ..	19,644	20.05	31,806	32.47	2,609	2.66	212	.21	125	.12	261	.26	3,043	3.10	222	.22	2,152	2.19	8,604	8.78	7,488	381.1	3,661	11.51	1,592
Average of 1904-1913..	20,148	21.48	39,580	42.19	6,749	7.19	717	.76	489	.52	274	.29	3,301	3.51	388	.36	3058	3.26	8,926	9.51	8,964	9.55	4,067	4.33	1,844
Average of 1908-1913 ..	20,483	20.92	35.106	35.86	3,437	3.51	623	.63	574	.58	308	.31	3,137	3.20	269	.27	2,668	2.72	8,623	8.80	8,307	405.5	3,938	11.21	1,679
1914 ..	19,679	2·009	31,853	32·52	2,941	3·00	252	.25	221	.22	213	.21	2,877	2·93	263	·26	1,889	1·92	8,734	8·91	7,580	385·1	3,775	11·85	1,561

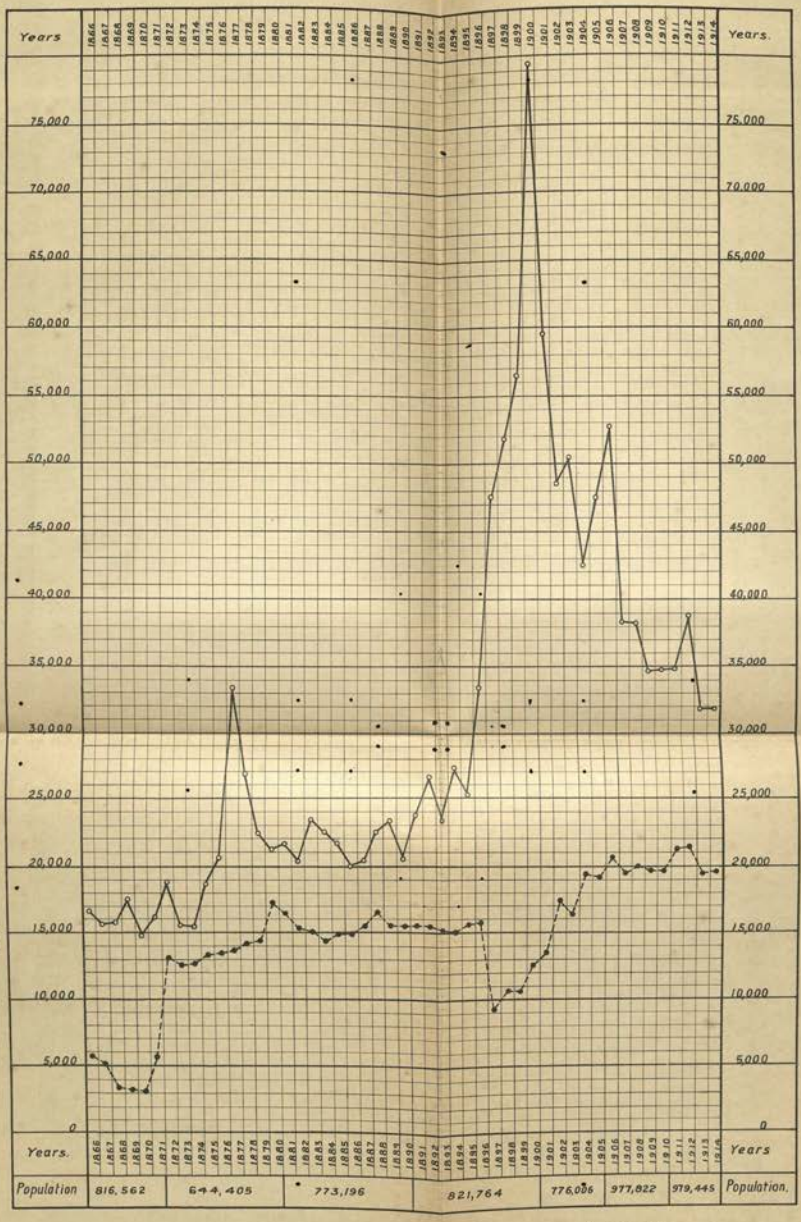
Climatic Conditions in 1914.

The climatic conditions during the year may be considered to have been more favourable than in 1913. The total rain-fall recorded at the Colaba Observatory was 81·62 inches against 70·96 in 1913; more abundant than in any other year since 1907 and about ten and a half inches above the City's normal (71·15).

ANNUAL TOTAL MORTALITY AND LIVE BIRTHS

REGISTERED IN THE CITY OF BOMBAY

1866–1914.



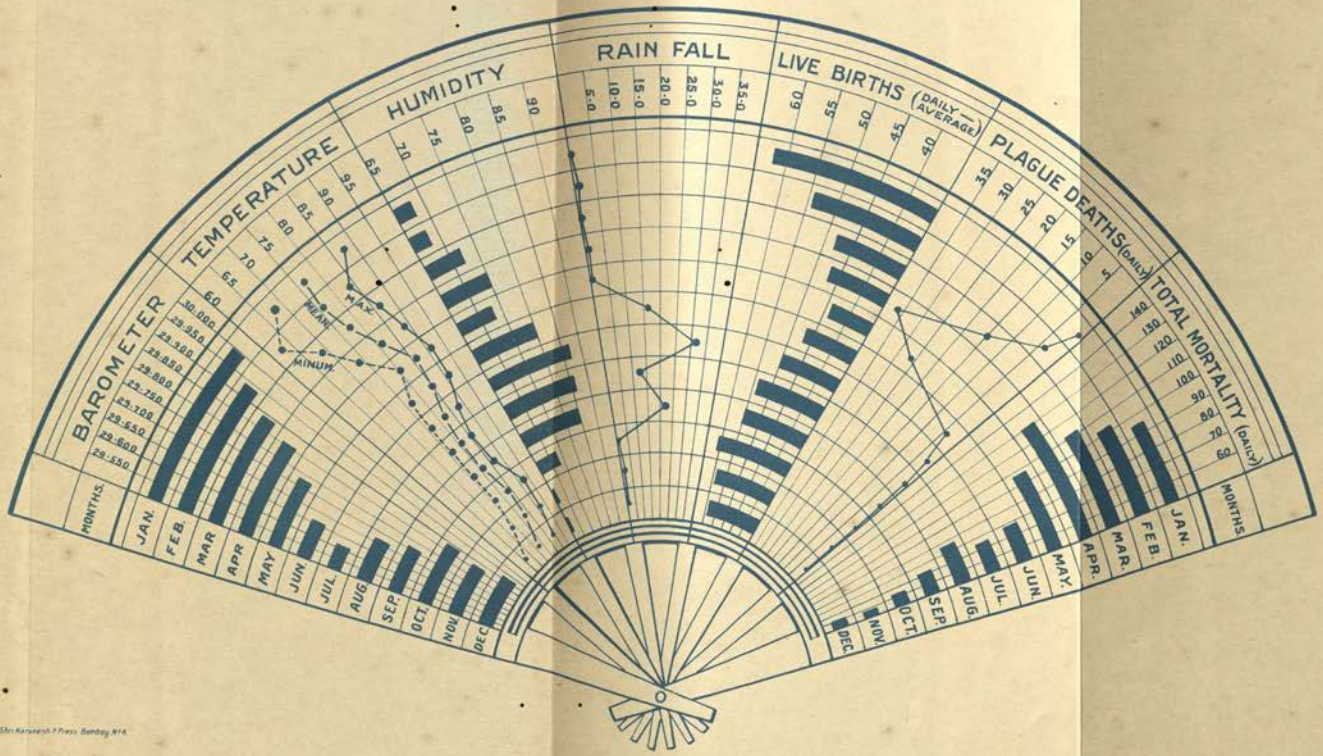
Total Mortality ——o——

Live Births (Registered) - - - -o- - - -

Lith. Shri Narayan Press, Bombay 1914.

DIAGRAM

DAILY MEAN BIRTHS, DEATHS AND CLIMATIC CONDITIONS IN BOMBAY DURING THE SEVERAL MONTHS OF 1914.



Lith. Shri Karunesh & Press Bombay No 4

The following Table shows the monthly and total rain-fall in the City during the last ten years :—

Year.	January to June.	July.	August.	September to December.	Total.
1904	15·19	10·14	5·72	2·37	33·42
1905	6·61	15·30	4·35	7·40	33·66
1906	13·35	18·10	20·91	3·94	56·30
1907	22·82	59·26	15·93	2·77	100·78
1908	15·41	21·13	9·67	7·33	53·54
1909	16·68	31·37	7·82	15·35	71·22
1910	23·95	7·42	16·89	19·60	67·86
1911	10·95	15·89	16·90	2·77	46·51
1912	11·22	25·77	9·70	7·36	54·05
1913	25·81	33·58	3·47	8·10	70·96
1914	**16·84**	**31·12**	**12·44**	**21·22**	**81·62**

During the year under review, rain fell on 114 days : 1 day in each of the months of February, April and October ; 25 days in June ; every day in July ; 30 days in August, 23 in September and 2 days in November : against 94 days in 1913, 87 in 1912 and 92 in 1911.

Readings of the Thermometer.

MONTHS.	1909.			1910.			1911.			1912.			1913.			1914.		
	Maximum.	Mean.	Minimum.	Maximum.	Mean.	Minimum.	Maximum.	Mean.	Minimum.	Maximum.	Mean.	Minimum.	Maximum.	Mean.	Minimum.	Maximum.	Mean.	Minimum.
January ..	79·6	73·0	62·7	85·1	74·7	61·4	88·4	75·5	63·1	88·5	76·9	66·4	84·5	75·7	65·4	87·2	68·7	77·0
February ..	83·0	74·8	66·1	86·4	77·0	66·8	90·2	75·6	59·2	88·0	77·3	66·7	84·6	76·5	64·8	84·5	63·4	76·0
March ..	87·2	79·8	71·0	90·4	79·7	68·7	85·6	78·7	70·4	89·2	79·9	70·8	86·0	77·6	69·3	86·3	69·2	78·0
April ..	90·1	82·2	73·9	88·6	82·9	75·5	88·6	81·2	73·4	90·7	84·5	76·2	89·3	82·7	72·5	89·5	74·4	81·9
May ..	91·2	86·2	80·4	90·2	84·9	77·8	91·3	85·6	78·4	91·9	86·5	79·4	92·4	86·5	79·4	91·3	80·8	86·5
June ..	91·4	83·8	76·0	92·6	83·1	76·2	90·4	83·7	77·4	93·4	85·4	76·8	93·0	83·7	74·8	91·6	77·4	85·0
July ..	85·6	80·2	75·6	87·4	82·4	77·3	88·0	82·1	75·8	87·4	82·1	76·9	86·6	81·5	74·8	88·7	76·2	82·2
August ..	85·4	80·8	75·8	85·2	80·3	75·6	84·6	80·3	74·8	85·3	81·0	75·5	85·6	81·4	75·7	85·4	76·8	81·2
September ..	84·4	79·5	74·1	84·8	79·8	74·4	85·5	81·4	77·0	87·3	81·8	76·4	87·1	81·2	76·0	86·6	76·8	81·5
October ..	88·2	80·6	73·0	89·2	81·0	73·2	90·2	82·9	74·4	91·3	82·6	74·2	89·4	82·7	75·0	92·2	76·5	84·4
November ..	88·1	79·5	69·4	87·4	78·2	67·8	90·8	81·3	74·3	91·6	80·3	68·8	89·2	79·8	70·5	91·7	73·4	82·7
December ..	85·8	76·1	67·1	87·0	75·8	66·3	89·2	80·2	70·6	85·9	77·6	68·4	87·0	76·6	64·7	88·4	66·7	77·4

The following are the principal statistics for 1914 :— Principal Statistics for 1914.

Area of Bombay City and Island	22·55 Sq. Miles.
Population by the Census of 1911	979, 445
Average Density of population	67 per acre.
Total Rain-fall	81·62 inches.
Number of *live* births registered	19,679
Birth-rate per 1,000 of total population	20·09
Number of deaths from all causes	31,853
Death-rate per 1,000 of population	32·52
Number of Deaths of Infants (under 1 year)	7,580
Infantile Death-rate per 1,000 births registered	385·1
Deaths of children, 1 to 5 years	3,775
Death-rate of do. do.	3·85
Number of deaths from Plague	2,941
Death-rate from Plague	3·00
Number of deaths from Small-pox	252
Death-rate do. do.	·25
Number of deaths from Cholera	221
Death-rate do. do.	·22
Number of deaths from Malaria	213
Death--rate do. do.	·21
Number of deaths from all Fevers including Malaria ..	2,877
Death-rate from all Fevers	2·93
Number of deaths from Measles	263
Death-rate from Measles	·26
Number of deaths from Tuberculosis	1,889
Death-rate from Tuberculosis	1·92
Number of deaths from Respiratory Diseases	8,734
Death-rate do. do. do.	8·91

Review of Health Conditions in 1914.

It will thus be observed that the progressive improvement in the health conditions of the City recorded in previous years was well maintained during 1914; the incidence of the principal infectious diseases continued appreciably low, and none of them was epidemic except Plague, the death-rate from which, though somewhat higher than in 1912 or 1913, was lower than in any other previous year since the appearance of the disease in 1896.

The mortality from Tubercular Diseases further declined during the year to 1,889 from 2,152 in 1913 and was the lowest on record.

The infant mortality was 92 higher than in 1913 but lower than in any other year since 1898, irrespective of the increase in the population that has since taken place.

The mortality from all Fevers was 166 lower than in 1913 and the lowest since 1904 (2,530) except 1909 (2,800); that from Malaria, 48 lower than in 1913 and the lowest since 1907 (149).

The mortality from all causes was 31,853; only 47 more than in 1913 when it was the lowest since 1896. But if allowance be made for the deaths registered in 1913 (527) and 1914 (588) among new arrivals not belonging to the City, the mortality during the year under review will be found to have been less than in the preceding year and the lowest since 1896, the first year of Plague.

The number of *live* births registered during the year was 19,679, being 35 more than in 1913 which recorded the lowest figure (19,644) since 1908.

First Natural Increase registered in Bombay.

But a statistical phenomenon of the year, not disclosed in the figures given above, was the repeated excess of registered births over deaths—successively during two weeks in October ending the 10th and 17th and the three weeks ending the 21st and 28th November and 5th December and again in the week ending the 19th December.

This natural increase (excess of births over deaths) is of special interest not only as being of very rare occurrence in an Oriental City but also without a parallel in the sanitary history of Bombay.

It could not be said that this was due to an exodus of the people—though such an exodus did take place—consequent on the closure of numerous mills in the City or the general dulness of trade and industry in consequence of the War; for during the last 4 months of the year after the out-break of hostilities in August, over 100,000 troops and followers came into the City from all parts of India and England; also thousands of Mahomedan pilgrims returning from the Haj: many remained for sometime. There was thus more than a counterbalancing influx of people during this period; such influx being only of males, could have contributed to raise the mortality and not the number of births occurring in the City.

Comparison with Health Conditions of 1913.

Compared with 1913, the principal increases of mortality were registered as under:—

Cause of Death.	*Increase.*
Small-pox	40
Measles	41
Plague	332
Cholera	96
Dysentery	81
Respiratory Diseases	130
Infant Mortality	92

These increases were, however, counterbalanced by the following decreases:—

Cause of Death.	*Decrease.*
Fevers	166
Malaria	48
Diarrhœa	152
Tuberculosis	263
Diseases of the Digestive System	54
" " Circulatory "	56

The total mortality was 31,853—47 higher than in 1913; the corresponding death-rates being 32·52 and 32·47 per 1,000 living.

Births and Birth-rate.

The number of births registered during the year, excluding 1,561 still-births, was 19,679. It exceeded the figure for 1913 (19,644), which approaches it nearest, by 35 but was 469 less than the decennial average (1904-1913).

The birth-rate per 1,000 of population works out to 20·09 against 20·05 in 1913 and was the lowest since 1901 (17·42) except 1907 (19·97), and 1913.

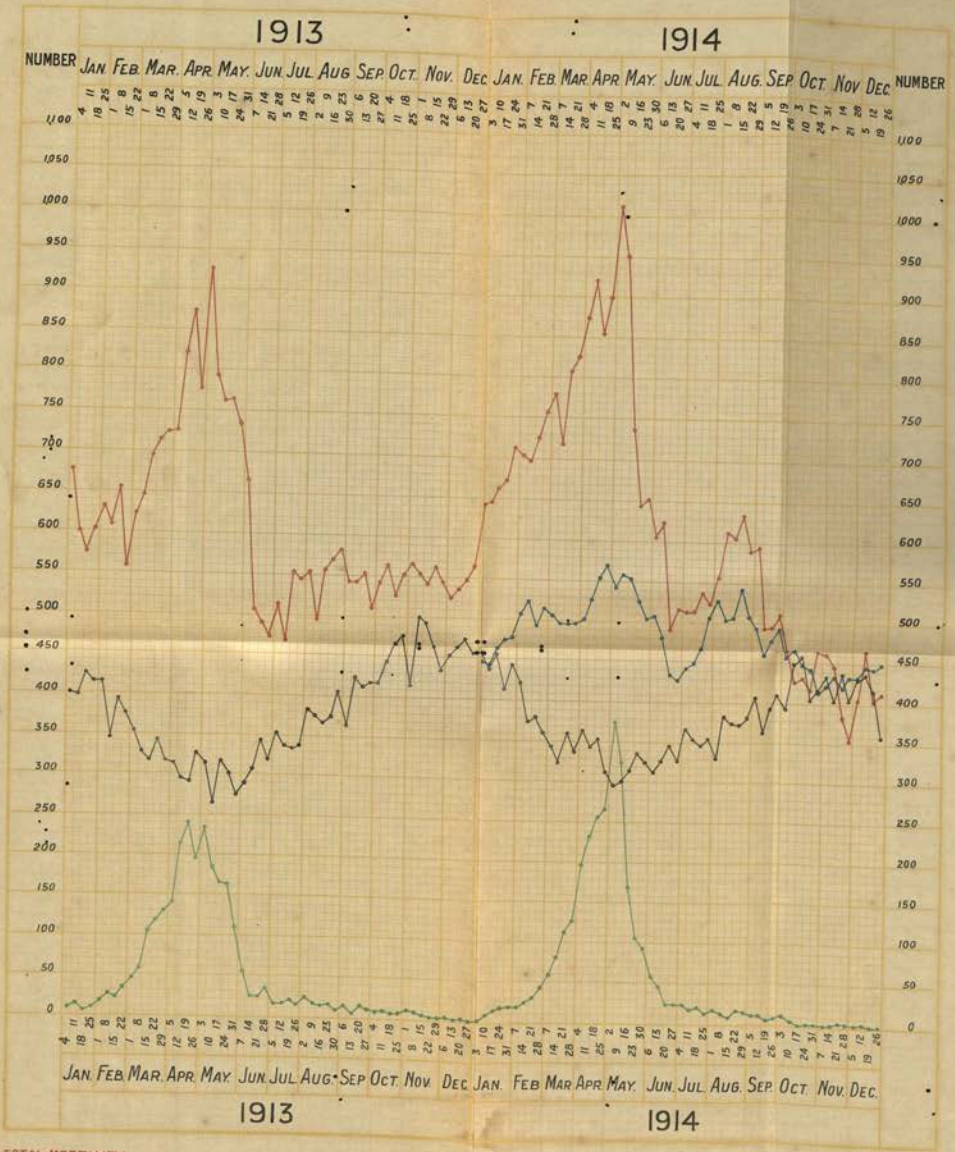
Births by Months.

It will be observed from the following Table that, during every one of the first seven months of the year, a larger number of births was registered during 1914, so that at the end of the period, we were 603 births in advance of the preceding year; but during succeeding months, the relative positions underwent a change and the year under report closed with a total of 19,679 births and a small increase of 35 over the figure for 1913 (19,644).

DIAGRAM

WEEKLY TOTAL AND PLAGUE MORTALITY AND LIVE BIRTHS REGISTERED.

1913 AND 1914.



Shri Narunesh P. Press Litho. Bombay 8.

MONTHS.	No. of Births registered in 1914.	No. of Births registered in 1913.	No. of Births registered in 1912.
January	1,945	1,797	2,071
February	1,534	1,479	1,793
March	1,513	1,444	1,811
April	1,439	1,300	1,643
May	1,388	1,289	1,669
June	1,426	1,352	1,552
July	1,552	1,533	1,684
August	1,674	1,681	1,754
September	1,664	1,736	1,746
October	1,914	1,993	1,864
November	1,774	2,013	1,931
December	1,856	2,027	2,000
TOTAL ...	19,679	19,644	21,518

Census of children upto two years of age in selected chawls.

It will be remembered that in 1913, owing to a very marked decline being observed in the number of births registered during the earlier months of that year, a Census was taken on 31st May of children up to two years of age in some of the thickly populated chawls, especially in poorer localities, selected from the different Wards of the City.

In the year under report, a similar enumeration was made on 29th May, with a view, chiefly, to checking the results obtained in 1913. The arrangements were exactly the same. In all 50 chawls were selected including 8 belonging to the Improvement Trust and 1 to the Port Trust: against 47 in 1913 of which 5 chawls were of the Improvement Trust.

Thanks to the co-operation of the Chairman of the Improvement Trust, we had the assistance of two of their staff in the enumeration of their chawls, while the Port Trust deputed one of their Officers to assist in the census of their chawl—Block A, Wari Bunder.

The following are a few broad facts revealed by the Census:—

(1) The total population enumerated in all the 50 chawls together was 15,546 against 26,506 in 47 chawls in 1913.

(2) The number of children up to 2 years of age enumerated was 676, against 1,060 in 1913.

The number of births registered among them was 390, giving the ratio of 25·08 per 1,000 of population in the selected chawls; in 1913, the corresponding number of births registered was 494 and the birth-rate 18·63.

The birth-rate for the whole City during 1914 was 20·09 and the average of the preceding quinquennium (1909-1913) was 20·90.

(3) The proportion of children enumerated (upto 2 years of age) to the total (enumerated) population was 4·34 per cent. against 4 in the similar Census of 1913; the proportion of such children to the total population of the City was 2·28 or roughly 2·3 by the general Census of 1911.

(4) 281 children out of 676 enumerated were those born out of Bombay, *i.e.*, 41·56 per cent., against 515 children, equal to 48·5 per cent. according to the Census of 1913; the average number of such children during the preceding 5 years is 33·40 per cent.

(5) Of the 395 children found to have been born in the City, 390 or 98·73 per cent. were registered and 5 or 1·27 escaped registration. In 1913, 494 births out of 546 were registered, the proportion of registration being 90·47 per cent., 52 children or 9·53 having escaped registration.

(6) Facts noted under (3) would appear to point to the existence in the City on 29th May 1914 of a larger proportion of children upto 2 years of age than that discovered by the Child Census of 1913 (4 per cent.) or the General Census of 1911 (2·28 per cent.) and those noted under (4) reveal the existence of a larger number of out-born children in the City than the average number of such children during the preceding five years; but much smaller than in 1913 as shown by the Child Census of that year.

In the Report on the Census of 1913, it was observed that "the decrease in the number of births registered was to a considerable extent due to the operation of several forces compelling a temporary emigration of the female population." This observation applies but with modified force to 1914. For rain was more abundant in 1914 than in previous years since 1907 and the local conditions appear to have been more favourable. Perhaps, therefore, fewer families temporarily left the City during this period, as the larger number of births registered in the City and the smaller proportion of out-born children detected during the Census would show.

The proportion of births that escaped registration was found to be 9·5 per cent. in 1913 but 1·26 in 1914; this may be taken to indicate more thorough registration than in 1913.

Turning to the returns of the latter half of the year, November and December are usually among the months which register the largest number of births; the year under report was, however, an exception to this general experience. If, therefore, the known fact of an exodus of the population during the latter months of the year, in consequence of the War, be taken in conjunction with the unusual fall in the number of births observed during the closing months of the year, the relation of cause and effect between these two phenomena naturally suggests itself: for, while the total population may have during this period not suffered any considerable diminution owing to additions received from time to time in the shape of large numbers of troops sojourning in and passing through the City, there can be little doubt that the female population was effectively reduced below the normal, and this reduction was mainly responsible for the unusual fall in the number of births registered during November and December.

Birth-rate.

The birth-rate calculated per 1,000 living was 20·09 in 1914 in Bombay: this is a trifle higher than that registered in 1913 (20·05) but 1·39 lower than the decennial average (1904-1913) which was 21·48, and lowest since 1907 (19·97).

The falling birth-rate in some of the cities of the world.

This fall in the birth-rate is, however, not peculiar to Bombay City; for the ratio has declined also in numerous European countries in successive decennia since 1870. The Registrar-General of England and Wales points out that in 1876, the birth-rate in that country attained the highest point on record (36·3 per 1,000 living) and since that date the ratio has, with a few insignificant exceptions, fallen year by year. It was 26·3 in 1907 and declined to 25·1 in 1910, 24·4 in 1911 and was 23·8 in 1912—the lowest on record.

In Glasgow, the fall has been progressive since 1879, and during the five years from 1909-1913, the highest annual rate was 29·6 in 1909 and the lowest 27·7 in 1911.

It would be interesting to make a comparison of birth-rates of some of the principal cities in the world:—

Name.	Period.		Year.
	1902-11.		*1912.*
Glasgow	29·0		28·1
London	26·3		24·5
Liverpool	32·2		29·6
Manchester	29·4		25·4
Birmingham	29·2		26·2
——	*1902*	*1911*	*1912*
France	21·7	18·7	19·0
German Empire	35·1	28·6	..
United Kingdom	28·0	24·4	23·9
India	39·3	38·5	38·4

This reduction has been ascribed to various causes, *e.g.*, reduction in the number of marriages and postponement of the age of marriage in supposed conformity to social requirements or associated with economic conditions, diminution in the proportion of women of child-bearing age, variation in the fertility of women or an ebb and flow over long periods primarily dependent on fluctuations in what is called germinal activity, and intentional reduction of births.

In India, the maximum appears to have been registered in 1904 (40·8); the ratio then gradually declined to 36·6 in 1909 and was 38·4 in 1912.

In the Presidency of Bombay, during a period of eighteen years from 1895, the highest ratio was recorded in 1910 (37·3); it declined to 36·0 in 1911, and to 34·97 in 1912, and 34·96 in 1913.

In Bombay City, the highest birth-rate on record is 25·2 registered in 1904; this is, however, much higher than the maximum for Calcutta which was reached in 1911 (21·7). Since 1904 the ratio has fallen in Bombay. The variations have, however, not been considerable except in 1906, when the rate fell to 21·2 from 24·6 in the preceding year. The rate for 1913 (28·0) was the lowest since 1908; 17·4 having been registered in 1901 and 19·9 in 1907.

	1911.	*1912.*	*1913.*
Bombay	21·8	21·9	20·0
Calcutta	21·7	21·6	20·5
Madras	38·3	39·0	37·6
Rangoon		18·25	18·85

Calculation of the Birth-rate.

So far the birth-rate has been calculated on the total number of population of all ages; this is what is called the crude birth-rate and is the appropriate form of statement for recording the net result of the various factors governing reproduction in a community; and is therefore, in conjunction with the crude death-rate, the appropriate means of measuring natural increase.

But the crude birth-rate will appear to be of little value when we bear in mind the great preponderance of males, the large proportion of population below the age of 15 years and of widows in an Oriental City who can never re-marry (the Census of 1911 showing 31,685 widows of conceptive ages), as also the diminution of fertility with advancing age.

By far the most valuable statement, therefore, is that based on the number of potential mothers, *i.e.*, female population of conceptive age (15 to 45 years), though their fertility is only one of the factors governing re-production. If, therefore, the birth-rate for 1914 is calculated on the number of possible mothers based on the Census of 1911, it works out to 94·37 against 94·20 in 1913 and 93·92 in 1906, when the number of possible mothers (women aged 15-45 years) was greater than in 1911. The results of calculating the proportion of registered births (1) to the total population of both sexes and all ages and (2) to the female population aged 15-45 years are shown in the following Table :—

CENSUS YEAR.	Proportion per cent. of women aged 15-45 years in the total population of both sexes and all ages.	Proportion per cent. of married women in female population aged 15-45 years.	Of the married women aged 15—45 years, the proportion per cent. of four groups of ages.				Persons married to 1,000 marriageable persons in the population.	Birth-rate calculated		
			Aged 15—20 years.	Aged 20—25 years.	Aged 25—35 years.	Aged 35—45 years.		On the number of Births registered in	Per 1,000 of total population at all ages.	Per 1,000 of female population aged 15—45 years.
1901	22·05	77·08	18·55	25·60	39·35	16·49	714·34	1901	17·42	79·00
1906	22·61	77·04	17·62	27·62	39·89	14·77	738·45	1906	21·24	93·93
1911	21·28	76·75	18·25	27·30	39·69	14·75	716·75	1914	20·09	94·37

Besides the factors which influence, in common, the birth-rate of every community, there are some peculiar to this City:—(1) the fairly well-established custom of sending prospective mothers home to their parents, where the infant has a better chance of life—so that there is in the City a number of children of mothers belonging to the City but born out-side it and therefore not registered; (2) the omission of parents or relatives to register births, through ignorance or neglect—so that there is a certain number of children who have escaped registration.

Corrected number of Births and Birth-rate.

During 1914, 6,442 of such children under one year of age were primarily vaccinated in Bombay; but a large number must have escaped vaccination either by death or postponement. It will be observed on reference to Table 22, appended to the Report, that 83·87 per cent. of the births registered were vaccinated during the year; it may, therefore, be assumed that 83.67 per cent. of the unregistered children also were vaccinated, the balance of 16·13 per cent. having escaped vaccination either by death or postponement.

Thus the infant population in the City during the year under report works out as follows:—

Number of Births registered	19,679
Number of Births unregistered (of children primarily vaccinated in Bombay)	6,442
Number of Births unregistered and which escaped vaccination (being 16·13 per cent.)...	1,238
Total number of Births ...	27,359

giving the birth-rate of 27·93 per 1,000 of population, which, for an urban rate, is a fairly high one, higher than that, for example, of London, Manchester or Birmingham.

Prosecution for Omission to report births.

No prosecution under Section 446 (1) of the City of Bombay Municipal Act was instituted during the year for failure to notify the occurrence of births to this Department.

TABLE OF BIRTH-RATES FOR THE DIFFERENT RACES OF THE CITY FOR 1913 AND 1914.

RACE OR CASTE.		Population by the Census of 1911.	Birth-rate for 1913.	Birth-rate for 1914.
Hindus.	Jains	20,460	18·37	16·91
	Brahmins	53,656	7·88	8·47
	Lingaits	1,179	33·07	20·35
	Bhatias	7,780	15·42	15·93
	Hindus of other Castes	547,192	16·78	16·65
	Hindus, Low-Caste	54,235	53·63	52·30
Mussalmans (including Negro-Africans)		179,346	20·94	20·80
Parsees		50,931	25·77	27·13
Jews		6,597	30·92	36·07
Native Christians		41,273	23·64	26·40
Eurasians		4,188	26·98	31·27
Europeans		11,894	17·15	15·80
Buddhists		578	22·49	10·38
Other and Unknown Castes		136	80·88	102·94
Total		979,445	20·05	20·09

Birth-rate by Races.

The birth-rate registered for the entire population was 20·09—the lowest of all subsequent years since 1907 except in 1913 when it was nearly the same (20·05).

Taking, however, Hindu communities as a whole, the birth-rate registered by them works out to 18·84 against 19·07 in 1913.

As in the preceding year (53·63), the highest rate (52·30) was registered by Hindus, low caste; the next highest 36·07 by Jews against 33·07 by Lingaits in 1913; the lowest rate was recorded, as usual, by Brahmins (8·47) but this was higher than in 1913 (7·88).

Among the different races inhabiting the City, Jews, Eurasians, Native Christians, Parsees, and Brahmins and Bhatias of Hindu communities exhibited an improvement in the birth-rate during the year, 36·07 being registered among Jews, 31·27 among Eurasians, 26·40 among Native Christians, 27·13 among Parsees, 8·47 among Brahmins and 15·93 among Bhatias against 30·92, 26·98, 23·64, 25·77, 7·88 and 15·42 respectively in 1913. All the other races registered a decline. The birth-rates among Lingaits and Buddhists were 33·07 and 22·49 in 1913, but dwindled down to 20·35 and 10·38 respectively in 1914; but these communities form but an inconsiderable proportion of the population. The birth-rate among Europeans dropped from 17·15 to 15·80 (but the decline may not signify much as many of them are migratory in habits and annually send their families home or to cooler latitudes to escape the heat of the tropics) and among Jains from 18·37 to 16·91. Hindus of other Castes recorded the rate of 16·65, Hindus, low caste 52·30 and Mussalmans (including Negro-Africans) 20·80 against 16·78, 53·63 and 20·94 respectively in 1913.

TABLE OF BIRTH-RATES FOR THE DIFFERENT SECTIONS IN THE CITY FOR 1913 AND 1914.

Ward.	Sections.	Population by the Census of 1911.	Birth-rate for 1913.	Birth-rate for 1914.
A	Upper Colaba	1,557	61·01	89·27
	Middle and Lower Colaba...	19,679	13·72	10·82
	Fort, Southern	3,462	3·46	6·64
	Fort, Northern	25,400	19·29	20·35
	Esplanade	17,761	10·97	11·20
B	Mandvi	33,202	12·34	11·74
	Chukla	24,231	19·02	16·59
	Umarkhadi	45,679	22·83	24·84
	Dongri...	27,246	19·48	15·89
C	Market	30,172	10·07	10·00
	Dhobi Talao	38,684	20·68	21·92
	Fanaswadi	27,403	20·36	22·29
	Bhuleshwar	36,459	15·46	16·12
	Khara Talao...	22,979	20·67	20·40
	Kumbharwada	27,703	20·17	19·63
D	Khetwadi	31,937	20·85	21·38
	Girgaum	30,779	19·78	19·65
	Chaupati	11,397	20·61	20·70
	Walkeshwar	10,640	19·54	21·24
	Mahalakshmi	26,302	21·55	22·08
E	Mazagon	30,075	24·83	23·94
	Tarwadi	28,424	30·08	30·88
	Second Nagpada	21,700	24·28	24·23
	Kamathipura...	36,751	20·27	21·76
	Tardeo	27,758	23·92	24·64
	Byculla	75,348	23·76	24·69
	First Nagpada	6,414	24·00	26·97
F	Parel	45,474	24·58	18·01
	Sewri	19,067	23·81	22·49
	Sion	30,680	25·71	27·02
G	Mahim	30,492	31·22	29·51
	Worli	89,611	20·03	21·37
	Harbour and Docks, Railways and Homeless	44,979	·02	·02
	Total	979,445	20·05	20·09

The discussion of birth-rates of different Sections of the City must be prefaced with the caution that these ratios, being based on the total population of both sexes, are obviously of little value for purposes of comparison, owing to the very un-even distribution of women and married women of fertile age, which must very largely explain the advantage in birth-rate which some Sections may appear to possess over others. Birth-rate by Sections.

The recorded birth-rate for the whole City is 20·09 and the Sections exhibiting appreciably lower rates are (1) Middle and Lower Colaba (10·82), (2) Esplanade (11·20), (3) Mandvi (11·74), (4) Chukla (16·59), (5) Dongri (15·89), (6) Bhuleshwar (16·12) and (7) Parel (18·01).

Upper Colaba recorded, as usual, the highest birth-rate (89·27) during the year—much higher than in the preceding year (61·01); Tarwadi comes next with 30·88. The lowest birth-rate was registered, as in previous years, in Fort Southern (6·64), which is purely a business

locality and not a residential one; the ratio is, however, a considerable improvement on that of 1913 (3·46); the next lowest was 10·0 for Market Section.

Total Mortality and Death-rate.

The climatic and health conditions of the year were more favourable than in 1913; the outstanding feature being the abnormally heavy rainfall.

The mortality from all causes together was 31,853, a trifle higher (+47) than in 1913, when it was (31,806)—the lowest recorded since the commencement of Plague: the increase may be attributed to enhanced mortality from Plague, as the largest increase (+332) was recorded under that head.

But if allowance be made for the number of deaths registered among new arrivals not belonging to the City (527 in 1913 and 588 in 1914), the mortality in the year under report will be found to be less than in the preceding year and the lowest since 1896.

Compared with the average of the preceding ten years (1904-1913), the mortality shows a saving to the City of 7,727 lives.

The mortality of the City fell from 79,350 in 1900 (rate 96·55) to 59,495 in 1901 (76·66), to 52,874 in 1906 (54·07), to 34,878 in 1909 (35·66); and with a slight up-ward trend in the following two years rose to 38,954 in 1912 (39·77) but suddenly dropped to 31,806 in 1913 (32·47) and was 31,853 in 1914 (32·52).

This remarkable fall in mortality from 79,350 in 1900 to 31,853 in 1914 is equivalent to a reduction in the death-rate of 64 per 1,000 living and will be found reflected in striking though varying proportion in the prevailing incidence of different diseases. (*Vide* Table supra at p. 2).

Compared with 1913, a gratifying reduction in mortality is noticeable principally under Tubercular Diseases (—263), Fevers (—166) and Diarrhœal Diseases (—71); but these decreases were discounted by the increase of 332 deaths under Plague, 130 under Respiratory Diseases and 96 under Cholera.

The mortality from Tubercular Diseases (1,889) was the lowest for at least three and a half decades; for the records of their incidence go no further back.

The mortality from Small-pox was since 1901 (159) never so low as in 1914 (252) except in 1913 (212).

The mortality from Plague (2,941), which has been characterised by some fluctuations, was higher than in 1912 (+1,224) and 1913 (+332) but otherwise the lowest since 1897.

The number of deaths from Fevers (2,877) was the lowest since 1909 (2,800).

The Infant Mortality (7,580) was 92 higher than in 1913 (7,488) but otherwise the lowest since 1898; it was 2,364 less than the average of the preceding decennium (1904-1913).

The figure of 31,853, however, represents the gross mortality of the City and is subject to correction. To arrive at a correct estimate, it is necessary, on the one hand, to exclude all deaths among persons newly arrived into the City and not belonging to it; on the other, to include all deaths which occurred among those who, belonging to it, died elsewhere. The resulting mortality was in the past termed *corrected* mortality. The expression may, however, at first sight seem ambiguous or open to objection: for mortality is generally corrected for differences of sex and age—constitution of the population; but it may also be corrected for other considerations, such as the deletion of those, who not belonging to the City, helped to swell its mortality returns, and the inclusion of those, who belonging to it, went out to die either to their homes up-country or to the numerous out-lying Sanatoria. Such adjustment is, quite as truly as the other, a process of correction and the result, to prevent possible mis-understanding, may be termed *effective* mortality.

Adopting the suggestion of the Standing Committee of the Corporation, (*vide* their Review of my Report for 1910), letters of enquiry were, as in previous years, addressed to the Authorities in charge of the following outlying Sanatoria and Convalescent Homes with a view to ascertaining the number of deaths among those of this City who went to the Institutions for treatment or change of air: (1) Deolali, (2) and (3) Nasik, (4) Dumas (Surat), (5) Khandala, (6) Poona, (7) Coorla, (8) Dharampur (Simla Hills), (9) Panchgani, (10) Karla, (11) Lonavla and (12) Bandra.

The replies received show that only 3 deaths among such persons occurred during 1914.

It is obviously impossible to get at the number of those who died in their homes up-country; we have no record of such deaths nor can one be compiled. On the other hand, the number of deaths among new arrivals not belonging to Bombay was 588. Applying these corrections, the effective mortality of the City, as based on the available data, works out to (31,853 − 588 + 3 =) 31,268 giving the ratio of 31·92 per 1,000 of the population.

Such an estimate of the City's mortality is desirable, as it marks a greater approximation to the truth than the bare statement of the number of deaths in the community. This approximation would be still closer, but for the absence of any data regarding deaths occurred up-country among the inhabitants of this City; this absence largely accounts for, if it did not also accentuate, the disparity between the factors of inclusion and exclusion; though as an offset, against the possible reduction due to the omission of such deaths, may be mentioned those occurring among the undoubtedly large number who are attracted to the metropolis for various reasons—visitors bent on pleasure or business, vagrants, labourers in search of work, sick persons in search of expert medical advice or treatment, and others who come in order to be with their relations, and though not proper units of the population are counted among them when they happen to die after a stay of more than ten days.

It is, however, not improbable that these more or less balance each other and the death-rate is not materially affected by the want of either figure.

Mortality by Sex and Age-group.

The following Table of mortality exhibits the proportional contribution to the total result under each age-group in the two sexes.

TABLE OF PERCENTAGES TO THE TOTAL MORTALITY BY AGE-PERIOD IN 1912, 1913 AND 1914.

Age-Period.	1912.		1913.		1914.					
					MALES.		FEMALES.		PERSONS.	
	Total Mortality.	Percentage.	Total Mortality.	Percentage.	No. of deaths.	Percentage.	No. of deaths.	Percentage.	No. of deaths.	Percentage.
Under 1 year... ...	9,646	24·76	7,488	23·54	3,952	22·06	3,628	26·02	7,580	23·79
1 to 5 years ...	4,830	12·39	3,661	11·51	1,875	10·46	1,900	13·62	3,775	11·85
5 to 10 ,, ...	1,248	3·20	1,074	3·37	545	3·04	653	4·68	1,198	3·76
10 to 15 ,, ...	1,216	3·12	1,104	3·47	553	3·08	487	3·49	1,040	3·26
15 to 20 ,, ...	2,803	7·19	2,331	7·32	1,339	7·47	1,082	7·76	2,421	7·60
20 to 30 ,, ...	6,516	16·72	5,474	17·21	3,262	18·21	2,105	15·09	5,367	16·84
30 to 40 ,, ...	4,011	10·29	3,405	10·70	2,223	12·41	1,109	7·95	3,332	10·46
40 to 50 ,, ...	2,759	7·08	2,300	7·23	1,549	8·64	823	5·90	2,372	7·44
50 to 60 ,, ...	2,465	6·32	2,170	6·82	1,243	6·94	768	5·50	2,011	6·31
60 years and upwards.	3,449	8·85	2,794	8·78	1,364	7·61	1,386	9·94	2,750	8·63
Unspecified Ages ...	11	0·05	5	·01	5	·02	2	0·01	7	·02
Total ...	38,954	100·00	31,806	100·00	17,910	100·00	13,943	100·00	31,853	100·00

It will be observed that, of the total number of 31,853 deaths in the year under review, 17,910 were among males and 13,943 among females against 17,794 male and 14,012 female deaths in 1913. The male death-rate works out to 27·97 and the female to 41·11 per 1,000 of sex population against 27·79 and 41·31 respectively in the preceding year.

This disparity of rates of mortality among males and females is largely to be accounted for by the preponderance of males who form nearly two-thirds of the population.

There is a preponderance of female deaths over male in all the age-groups upto 20 years of age, and under that of 60 years and beyond, as in previous years; in respect to other age-groups the predominance is reversed. It will also be noticed that in the age-groups of 30—40 and 40—50 years, the male mortality (2,223 and 1,549) is almost the double of that among females (1,109 and 823 respectively).

The highest percentage of deaths to the total mortality in the male (22·06) as well as in the female (26·02) and the entire population (23·79) occurred, as usual, among children in the first year of life; the next highest (male 18·21, female 15·09 and the whole population 16·84) was recorded in the age-group of 20—30 years. This uniformity in the excessive mortality in the two sexes is peculiar to these two age-periods only; the next highest percentage of deaths (12·41) occurred among males in the age-group of 30—40 years, but among females (13·62) in the age-period of 1—5 years.

The lowest percentage of mortality among males (3·04) occurred during 5—10 years of life and among females (3·49), as well as in the entire population (3·26), in the age-period of 10—15 years.

Infant Mortality.

The total mortality among infants or children upto one year of age during the year under notice was 7,580. It was 92 more than in 1913 (7,488) but 727 less than the average of the preceding quinquennium (1909-1913) and 1,384 below the decennial mean (8,964).

The percentage of infant mortality to the total mortality at all ages during the year was 23·79 against 23·54 in 1913.

If we survey the record of previous years, the out-look will be found to be encouraging; for never before since 1898 was such a low mortality registered among infants except in 1913; and it is reasonable to expect that still further reduction will result from the increased facilities for supervision which have been provided and will be dealt with later on.

Calculated per 1,000 of births registered, infant mortality reached the highest rate of 1,063·3 in 1900; it suddenly dropped in the following year to 574·5 which was the next highest ratio. In subsequent years, the rate never attained to the level of either, but gradually declined, exhibiting, however, considerable variations. It was 459·2 in 1904, 423·6 in 1907 and 404·7 in 1909. The lowest (379·8) was chronicled in 1911, 381·1 in 1913 and 385·1 in 1914.

Thus since 1900, the fall in the infantile death-rate is equal to 678·2.

Infant mortality has been calculated above on the actual number of births registered; but for a correct estimate, it has to be calculated on the corrected number of births, so as to include infants who died during the year without their births being registered. The corrected number of births, as we have seen above, works out to 27,359 and gives an infant mortality of 277·05 per 1,000 against 268·74 in 1913 and 322·3 in 1912.

The variations and causes of infant mortality may be studied with the aid of the following Tables:—

TABLE OF INFANT MORTALITY BY MONTHS IN 1914 AND 1913.

MONTHS.	1914.						1913.
	Debility.	Nervous Diseases.	Respiratory Diseases.	All Causes.			All Causes.
				Males.	Females.	Total.	
January ...	219	127	185	334	327	661	550
February ...	190	109	206	332	282	614	481
March ...	185	108	220	342	333	675	570
April ...	163	125	203	346	313	659	661
May ...	155	136	252	361	341	702	682
June ...	136	128	277	360	325	685	649
July ...	181	110	284	378	363	741	707
August ...	241	100	237	417	353	770	715
September ...	192	79	157	292	280	572	639
October ...	194	97	159	315	247	562	615
November ...	172	69	139	234	234	468	581
December ...	159	83	106	241	230	471	638
Total ...	2,187	1,271	2,425	3,952	3,628	7,580	7,488

Infant Mortality by Months.

The attached Table exhibits the movement of infant mortality during the different months of the year; three columns giving the number of deaths from causes most fatal to children have been added, as they serve to explain the monthly fluctuations and their extent.

Compared with 1913, infant mortality in the year under review was higher month for month from January (661) till it reached the maximum of 770 in August: the only exception being April (659), which registered a decrease of 2; the aggregate increase during these eight months was 492 which, in consequence of the steady decline that then set in, was reduced during the next four months of the year to 92.

Nearly 70 per cent. (349) of the total increase (492) recorded during the first eight months of the year will be found to have occurred during the first quarter, principally under Debility (+160) and Respiratory Diseases (+146); the increased fatality from the latter cause during the year (2,425) being indicated by an excess of 312 deaths over the figure for 1913.

INFANT MORTALITY FROM PRINCIPAL CAUSES FROM 1908 TO 1914.

Cause of Death.	1908.	1909.	1910.	1911.	1912.	1913.	Average (1909 to 1913).	1914.	Increase or Decrease.
Small-pox	236	134	264	98	274	55	165	**60**	— 105
Measles	238	27	56	233	82	66	93	**82**	— 11
All Fevers...	229	182	238	251	277	201	229	**163**	— 66
Diarrhœa and Dysentery ...	763	611	674	581	900	615	676	**579**	— 97
Premature Birth	179	151	147	175	219	181	174	**187**	+ 13
Debility	2,872	2,626	2,567	2,364	2,581	2,207	2,469	**2,187**	— 282
Diseases of the Nervous System.	1,403	1,466	1,402	1,400	1,570	1,278	1,423	**1,271**	— 152
Do. do. Respiratory System.	2,557	2,231	2,292	2,364	2,877	2,113	2,375	**2,425**	+ 50
All Causes	9,077	8,030	8,253	8,120	9,646	7,488	8,307	**7,580**	— 727

It will be found from the fore-going Table that Debility and the Diseases of the Nervous and Respiratory Systems were responsible in the aggregate for over 77 per cent. (5,883 deaths) of the total infant mortality (7,580) against nearly 75 per cent. in 1913 and about 73 per cent. in 1912. Infant Mortality from Principal Causes.

Generally speaking, these are a group of causes which have reference to the social environment and economic condition of the parents, as regards the home and its surroundings, occupation of mothers entailing hard work, habits and poverty and insufficient food, all of which affect the mother during pregnancy and influence the health of the child before and after birth, and, aided by the unhygienic conditions in which a large proportion of the infants are born, help to swell the number of those who come into the world only to die.

Compared with the averages of the preceding five years, a striking reduction in infant mortality was in evidence under the following causes; Debility (—282); Diseases of the Nervous System (—152); Small-pox (—105); Diarrhœa and Dysentery (—97) and Fevers (—66): the total result indicating a saving of 727 infants.

The mortality from Small-pox, though a little higher than in 1913 (55), was lower than in other years and 105 below the quinquennial average (1909-1913); that from Measles (82) was the same as in 1912 and 11 less than the average of the preceding five years.

The mortality from Fevers (163) and Diarrhœa and Dysentery (579) was lower than in other years and 66 and 97 respectively below the decennial averages; that from Debility exhibited a steady decline from the year 1908 onward and though in 1912 slightly exceeded that of the two preceding years, it was in 1914 the lowest and 282 less than the average of the preceding five years.

The percentage of deaths from Nervous Diseases to total infant mortality was 16·7 during the year under report and the lowest since 1909 (18·2) except in 1912 (16·2); whereas that from Respiratory Diseases was 31·9 and the highest since 1909 (27·7).

The following Table classifies the mortality from Principal Causes among infants arranged under the three age-periods of 1-30 days, 1-6 months and 7-12 months during 1914; the corresponding figures for 1913 have been inserted for comparison. Infant Mortality by Age-periods.

TABLE OF DEATHS AMONG INFANTS FROM PRINCIPAL CAUSES BY AGE-PERIODS IN 1914 AND 1913.

Age-Period.	Year.	Small-pox.	Measles.	Malaria.	Ague and Remittent Fever.	Diarrhœa and Dysentery.	Premature Birth.	Debility.	Nervous System.	Respiratory System.	All Causes.	Percentage of deaths in each age-period to total deaths under 1 year of age.
1 to 30 days ...	1914	1	...	...	23	30	184	1914	294	67	2,588	34·14
	1913	3	...	...	29	34	181	1908	302	66	2,591	34·46
1 to 6 months ...	1914	36	18	3	56	158	3	232	683	1,040	2,360	31·13
	1913	27	13	5	64	151	...	259	694	833	2,203	29·42
7 to 12 months ...	1914	23	64	7	72	391	...	41	294	1,318	2,632	34·72
	1913	25	53	9	93	430	...	40	282	1,214	2,694	35·97
Total ...	1914	60	82	10	151	579	187	2,187	1,271	2,425	7,580	...
	1913	55	66	14	186	615	181	2,207	1,278	2,113	7,488	...

From an examination of the figures it will be noticed that Measles (64), Malaria (7), Ague and Remittent Fever (72), Diarrhœal Diseases (391) and the Diseases of the Respiratory System (1,318) were most fatal to infants in the age-period of 7-12 months, while deaths due to Small-pox (36) and Diseases of the Nervous System (683) were most numerous in the age-group of 1-6 months, as those due to Debility were in the first 30 days. Out of 187 deaths due to immaturity at birth, 184 occurred in the first month of life and the remaining 3 in the next age-period.

The study of the subject may be pursued with the help of the next Table, which shows the percentage or proportion of mortality under each principal cause of death to the total mortality from all causes among infants in each of the three age-groups.

The highest percentage of total infant mortality (34·72) was registered among children 7-12 months old; this was 1·25 lower than in the preceding year, and the lowest (31·13) in the age-period of 1-6 months: this was 1·71 higher than in 1913.

TABLE OF PERCENTAGES OF INFANT DEATHS FROM PRINCIPAL CAUSES IN 1914.

Age-Period.	Small-pox.	Measles.	Malaria.	Ague and Remittent Fever.	Diarrhœa and Dysentery.	Premature Birth.	Debility.	Nervous System.	Respiratory System.	All Causes.
1 to 30 days	0·03	...	...	0·88	1·15	7·15	73·95	11·36	2·58	34·14
1 to 6 months	1·52	0·76	0·12	2·37	6·69	0·12	9·83	28·94	44·06	31·13
7 to 12 months	0·87	2·43	0·26	2·73	14·85	...	1·55	11·16	50·07	34·72
Total ...	0·79	1·08	0·13	1·99	7·63	2·46	28·85	16·76	31·99	...

Scrutinizing the fore-going Table with the aid of that preceding it, it will be noticed that out of 19,679 children registered as born during the year, (*i*) 2,588 or 3 less than in 1913 died within the first month of life; for nearly three-fourths of these (1914 or 73·95 per cent. against 1908 or 73·63 in 1913), the cause of death assigned was Debility; that is, want of vitality, immaturity at birth, wilful or ignorant neglect and the methods adopted by the unskilled or untrained women attending the labour; (*ii*) 2,360 or 157 more than in 1913, died before attaining the age of six months; the cause of death, in the descending order of incidence, being 44·06 Diseases of the Respiratory System (against 37·81 in 1913), 28·94 Diseases of the Nervous System (Convulsions) against 31·50 in 1913, 9·83 Debility (against 11·75 in 1913) and 6·69 Diarrhœa and Dysentery (against 6·85 in the preceding year); (*iii*) 2,632 of the children or 62 less than in 1913 died before reaching the age of twelve months; the cause of death being 50·07 Diseases of the Respiratory System (against 45·06 in 1913), 14·85 Diarrhœa and Dysentery (against 15·96 in 1913) and 11·16 Diseases of the Nervous System (Convulsions) against 1·46 in 1913.

It will be observed that of the total mortality under 1 year of age, more than 34 per-cent. occurred in the first month of life and, further, that of the deaths at this early period of life, nearly three-fourths are due to Debility; in the second and third groups, the highest proportion of deaths is associated with the Diseases of the Respiratory System. The next most fatal cause is the Diseases of the Nervous System in the first and second groups and Diarrhœa and Dysentery in the third, all of which denote exposure and defective feeding.

TABLE OF MORTALITY AMONG INFANTS AND DEATH-RATE PER 1,000 OF BIRTHS REGISTERED IN EACH RACE IN 1913 AND 1914.

RACE OR CASTE.	1913.			1914.		
	Deaths under 1 year.	Number of Births registered.	Infant mortality per 1,000 of Births *in the caste.*	Deaths under 1 year.	Number of Births registered.	Infant mortality per 1,000 of Births *in the caste.*
HINDUS.						
Jains	298	376	792·5	285	346	823·6
Brahmins	254	423	600·4	250	455	549·4
Lingaits	36	39	923·0	33	24	1,375·0
Bhatias	43	120	358·8	51	124	410·6
Hindus of other Castes ...	3,435	9,187	373·8	3,391	9,112	372·1
Hindus, Low-Caste ...	1,264	2,909	434·5	1,284	2,837	452·5
Mussalmans (including Negro-Africans) ...	1,388	3,756	369·5	1,475	3,732	391·0
Parsees	247	1,313	188·1	240	1,382	173·6
Jews	36	204	176·4	38	238	159·6
Native Christians	409	976	419·0	434	1,090	398·1
Eurasians...	26	113	230·0	32	131	244·2
Europeans	31	204	151·9	39	188	207·4
Buddhists	2	13	153·8	2	6	333·3
Other and unknown Castes	19	11	1,727·2	26	14	1857·1
Total ...	7,488	19,644	381·1	7,580	19,679	385·1

The foregoing Table gives the number of deaths among infants and of births registered in the different races of the population, and the death-rate calculated per 1,000 of births registered in the particular race or caste: corresponding figures for 1913 have been added for comparison. Infant Mortality by Race or Caste.

Compared with 1913, a slight improvement is noticeable in the infantile death-rate among Brahmins (from 600·4 to 549·4), Parsees (from 188·1 to 173·6), Jews (from 176·4 to 159·6) and Native Christians (from 419·0 to 398·1).

Among Hindus in the aggregate and Mussalmans, who together form the bulk of the City's population, the ratios stand as under :—

	1913	*1914*	Increase or Decrease.
Hindus	408·3	410·4	+ 2·1
Mussalmans ...	369·5	391·0	+ 21·5

In other communities also considerable enhancement was registered, but in their case the figures dealt with being comparatively small, the ratios calculated thereon have to be accepted with caution.

The infantile death-rate for the whole City, calculated on the total number of registered births, was 385·1. The highest death-rate, calculating for different castes on the number of births registered among them, was recorded among Lingaits (1375·0) during the year under review as in 1913 (923·0) and the lowest (159·6) among Jews against 151·9 among Europeans in 1913. In the ascending order of incidence, after Jews stand Parsees (173·6), Europeans (207·4), Eurasians (244·2), Buddhists (333·3), Hindus of other Castes (372·1), Mussalmans including Negro-Africans (391·0), Native Christians (398·1), Bhatias (410·6), Hindus, Low-Caste (452·5) and Brahmins (549·4).

The ratios among principal communities during 1914 and the preceding five years are given in the following Table :—

INFANT MORTALITY PER 1,000 OF BIRTHS REGISTERED IN THE CASTE.

—	1909.	1910.	1911.	1912.	1913.	1914.
(1) Hindus (All Castes)	427·2	431·2	407·0	483·7	408·3	410·4
(2) Mussalmans (including Negro-Africans).	403·5	441·7	388·5	421·6	369·5	391·0
(3) Parsees	188·6	271·4	186·2	206·2	188·1	173·6
(4) Jews	184·3	209·6	157·8	302·2	176·4	159·6
(5) Native Christians	440·0	432·1	344·0	462·2	419·0	398·1
(6) Europeans	265·6	228·6	173·1	207·9	151·9	207·4
(7) Eurasians	416·6	397·2	290·3	388·2	230·0	244·2

The geographical variation of infant mortality or its relative incidence in the different Sections of the City may be studied with the aid of the following Table, which gives the ratio of infantile deaths registered in each Section to the number of births in that particular Section. Infant Mortality by Sections.

These rates have, however, to be accepted with caution. For apart from the uneven distribution of the female population in the different Sections, there are several factors which introduce an inevitable element of error or uncertainty in the discussion of infant mortality on the Sectional data.

The difficulties in the way of registration of all births occurring in the City, consequent on parental ignorance or neglect varying with the class of population inhabiting the different Sections; the prevailing custom of sending prospective mothers home to their native districts for confinement—resulting in an excess of infants in the City over those actually born and registered in it; the inflation of the infantile death-rate due to out-born infants dying in the City; further, the inter-sectional movement of population, neither uncommon nor infrequent, making it possible for children born in one Section to die in another; and lastly what may be termed the migratory habits of the higher official and the affluent classes who send out their families to the most congenial or least inconvenient latitudes during certain seasons of the year.

All these causes operate in varying degrees in different Sections of the City and influence the infantile death-rate.

The rate of infant mortality for the whole City in 1914 based on the number of births actually registered was 385·1; only twice was it ever lower: 381·1 in 1913 and 379·8 in 1911; compared with the mean of the preceding five years, the reduction is of 20·4; the Sections with a higher incidence of such mortality than the City during 1914 were :—

(1) Middle and Lower Colaba 577·4 and Fort Southern, 434·7 in A Ward;

(2) All the Sections of B Ward—Mandvi 538·4, Chukla 422·8, Umerkhadi 422 and Dongri 494·2; (3) Market 480·1, Bhuleshwar 423·4, Khara Talao 466·9 and Kumbharwada 417·2 in C Ward; (4) Tarwadi 486·3, Second Nagpada 450·5, Kamathipura 465 and Byculla 395·4 in E Ward; (5) Parel 406·5 and Sewri 403·2 in F Ward; and (6) Worli 396·8 in G Ward.

All these, with the exception of Middle and Lower Colaba, are among Sections with which a high death-rate is generally associated, being largely inhabited by the poorer and ignorant classes, living in insanitary houses and amidst un-hygienic surroundings.

The whole of A Ward with the exception of Middle and Lower Colaba and Fort South and the whole of D Ward registered a lower death-rate; as also Dhobi Talao (313·6) and Fanaswadi (286·4) in C Ward; Mazagon (365·2), Tardeo (381·5) and First Nagpada (242·7) in E Ward; Sion (312·4) in F Ward and Mahim (300) in G Ward.

Compared with the last year, the following Sections exhibit some improvement:— Upper Colaba (64·7) and Esplanade (346·7) in A Ward; Market (480·1), and Bhuleshwar (423·4) in C Ward; Khetwadi (286·9), Chowpati (258·4) and Mahalakshmi (283·9) in D Ward; Tarwadi (486·3), Tardeo (381·5) and Byculla (395·4) in E Ward; Sewri (403·2) and Sion (312·4) in F Ward and Worli (396·8) in G Ward.

STATEMENT OF THE RATIO OF DEATHS AMONG CHILDREN UNDER 1 YEAR PER 1,000 OF BIRTHS REGISTERED IN EACH SECTION IN 1913 AND 1914.

Ward.	Sections.	1913.	1914.	Ward.	Sections.	1913.	1914.
A	Upper Colaba	136·8	64·7	E	Mazagon	266·8	365·2
	Middle and Lower Colaba.	455·5	577·4		Tarwadi	501·7	486·3
	Fort, Southern	166·6	434·7		Second Nagpada	396·5	450·5
	Fort, Northern	338·7	359·7		Kamathipura	418·7	465·0
	Esplanade	348·7	346·7		Tardeo	442·7	381·5
B	Mandvi	504·8	538·4		Byculla	409·8	395·4
	Chukla	396·9	422·8		First Nagpada	181·8	242·7
	Umarkhadi	403·6	422·0	F	Parel	323·7	406·5
	Dongri	451·9	494·2		Sewri	455·9	403·2
C	Market	526·3	480·1		Sion...	349·8	312·4
	Dhobi Talao	301·2	313·6	G	Mahim	296·2	300·0
	Fanaswadi	259·8	286·4		Worli	403·3	396·8
	Bhuleshwar	460·9	423·4		Harbour and Docks ..	...	...
	Khara Talao	395·7	466·9		Railways and Homeless		
	Kumbharwada	413·2	417·2		Total ...	381·1	385·1
D	Khetwadi	340·8	286·9				
	Girgaum	333·3	357·0				
	Chowpati	280·8	258·4				
	Walkeshwar	211·5	256·6				
	Mahalakshmi	292·7	283·9				

It may be pointed out that while Upper Colaba returned the lowest infantile death-rate (64·7), Middle and Lower Colaba registered the highest (577·4), and Fort Southern, recorded the largest excess over last year (+ 268·1): all of these Sections being in A Ward.

But Upper Colaba has a population of only 1,557 by the Census of 1911, and Fort Southern is mostly a business locality and not residential.

If Upper Colaba be excepted, it will be observed that the incidence of infant mortality was the lowest in First Nagpada (242·7), which was in recent years re-built as a result of the operations of the City Improvement Trust. Next, with a slight range of difference (256·6 and 258·4), come Walkeshwar and Chowpati in D Ward, both of which are inhabited by the affluent—Europeans and others.

Then, generally speaking, it will be noticed that higher rates prevailed in Sections which are more or less congested, and the bulk of whose population are the poorer and ignorant classes; *e.g.*, Mandvi (538·4), Dongri (494·2), Market (480·1), Khara Talao (466·9), Kamathipura (465), etc., for the infantile death-rate varies inversely as the social and economic condition of a people and is a sure index of it.

Work of Municipal Nurses and Midwives.

The following Table sums up the work of the ten Municipal Nurses and Midwives so far as it relates to attendance on confinements and infant visitations during the year. They have, during their daily rounds, to find out prospective mothers and attend on confinements among the poor and continue their visits even after the lying-in period and give advice on the care and feeding of infants. Other aspects of their work will be dealt with later on.

Summary of inquiries and of work of Municipal Nurses and Midwives.	1909.	1910.	1911.	1912.	1913.	1914.
Total number of Births (including still-born) registered	21,645	21,505	23,135	23,186	21,236	21,240
Percentage of Still-births to the total number of Births registered	8·3	7·2	7·6	7·1	7·4	7·3
Number verified by the Nurses	13,677	12,762	13,578	14,417	13,639	13,950
Percentage of the number verified to the total.	63·1	59·3	58·7	62·1	64·2	65·6
Percentage of the Confinements unattended...	18·0	15·2	12·7	13·0	12·8	9·5
Percentage of the Confinements attended by unskilled women	58·3	59·6	60·7	59·6	60·0	63·1
Percentage of the Confinements attended by qualified Nurses (including Municipal). ...	11·3	12·0	13·2	13·9	14·2	13·7
Percentage of the Confinements attended by Municipal Nurses	4·5	5·6	5·5	6·6	8·7	8·7
Percentage of Children born in Hospitals. ...	12·3	13·2	13·2	13·5	12·8	13·5
Percentage of Children born in healthy condition	67·8	68·9	74·9	73·7	71·9	75·2
Percentage of Children fed on breast. ...	64·9	59·8	69·7	66·5	68·4	62·7
Percentage of Children dying within 30 days	12·3	11·8	11·5	11·8	10·7	10·6
Percentage of the cases where the mothers left home for work.	31·3	27·9	34·4	29·7	30·6	33·0

It will be observed from the fore-going Table that out of the total number of 21,240 births (including still-births) registered in the City during the year, 13,950 or 65·6 per cent. were visited by the Municipal Nurses and Midwives: the percentage of verification being the highest since Infant Visitation was started in June 1908.

The proportion of still-births declined but one per cent. since 1909 and only ·1 below 1913. But the number of such births in 1914 (1,561) was the lowest since 1898.

The enormous decrease of over 47 per cent. since 1909 in the proportion of births wholly unattended may be considered gratifying: it fell from 18 in 1909 to 15·2 in 1910 and from 13 in 1912 to 12·8 in 1913 and to 9·5 in the year under report.

But the percentage of confinements attended by unskilled women shows no signs of decrease; it was (63·1) 4·8 higher than in 1909 and the highest since then. This is the most disconcerting feature of the Statement: as the rise has occurred (1) inspite of the presence of a growing number of trained Nurses and Midwives in the City and of the increased proportion of confinements which they appear to have been called to attend (2·4 more than in 1909, though ·5 less than in 1913); (2) inspite of an increasing proportion of such cases which the Corporation Midwives have been attending: (which ratio has risen almost steadily since 1909 and was 4·2 higher than the figure for that year); (3) inspite also of the higher proportion of births occurring in Hospitals (1·2 higher than in 1909).

The percentage of children born in a healthy condition, which was on the decline during the preceding two years, rose to 75·2 in 1914; this is an improvement equivalent to 3·3 over the previous year and 7·4 over 1909 (67·8).

The proportion of children fed on breast fell from 68·4 in 1913 to 62·7 in the year under notice; with the exception of 1910, this is the lowest ratio recorded. On the other hand, the percentage of mothers, who left for work leaving their children to the care of others, rose from 30·6 in the previous year to 33 in 1914: this is 1·7 in advance of the figure for 1909. But these two ratios exhibit such marked fluctuations from year to year as to suggest that their reliability for comparative purposes may be of questionable value.

However, the percentage of children dying within 30 days of birth declined further during the year and was the lowest, indicating a drop of 1·7 below that for 1909 (12·3).

Passing on to the activity of the Municipal Nurses and Midwives in other directions, they have morning and evening to visit the homes of the poor and ignorant, find out and report birth and death and sickness and insanitary conditions; also give homely talks and advice on cleanliness of person and home and surroundings and the precautions to be taken against infectious disease. Thus their frequent and friendly and benevolent visits are calculated to be of immense benefit to those who come within the sphere of their educative and stimulating influence.

During 1914 they paid 27,660 visits to houses, chawls and huts, enquired into 3,455 cases of ordinary sickness, 1,003 cases of infectious diseases and 1,549 deaths amongst the female population of the City; attended 1,214 confinements and ascertained 9,523 births.

Relief to Poor Women during Confinement.

Among the measures for the reduction of infant mortality, I referred in my last Annual Report to the scheme, which was brought into effect in July 1913, for giving relief to poor women during confinement in the shape of necessaries and comforts such as milk, loaves, bed, blanket, charpoy, etc.; and pointed out that during the six months of the year 42 cases had been relieved, the number having increased each succeeding month. The experience of 1914 points to increased advantage having been taken of the benefits offered: for such relief was dispensed in 166 cases during the year under report, 100 of these being in the second half of the year against 42 in the same period of 1913.

Maternity Home for the Poor.

In July 1914, I advised the appointment of a qualified Lady Doctor to supervise the work of the District Nurses and Health Visitors and the un-trained Dais; and the starting of a Maternity Home (with six beds to begin with) where poor women should be induced to go for confinement and the Dais encouraged to attend and see how confinements ought to be conducted. The Home to be located in the dis-used portion of the Falkland Road Dharmashala to be adapted to suit the requirements.

The initial scheme of relief had now been in operation for twelve months and the practical proof it afforded of the benefits conferred naturally led to the suggestion of further extension on more developed lines in the shape of a Maternity Home as a necessary adjunct.

The Corporation accorded their sanction (under Resolution No. 4225 of 24-9-1914) to the proposal and voted funds "to meet the cost of providing, as an experimental measure, a Maternity Home at the Falkland Road Dharmashala from 1st November 1914 to 28th February 1915." Future charges, the Municipal Commissioner had suggested, were to be provided for in the Budget.

But unforeseen difficulties arose in connection with the proposed use of the Dharmashala for this purpose and pending the settlement of the question, it seemed necessary to put off the starting of the Home.

When indefinite postponement seemed imminent, the Lady Willingdon Scheme, inaugurated in February 1914 by the Bombay Sanitary Association, under the auspices of Her Excellency Lady Willingdon, for improving the condition of women during confinement and the care of infants, offered to rent a building meanwhile for the location of the Home, which thus came to be started in February 1915 at No. 125, Bellasis Road—with Dr. Miss Mary Browne, L.M. & S., as the Resident Medical Officer in charge of the Home. Though the working of the Home does not properly pertain to the year under report, the event is of such importance that I consider it necessary to embody in this Report the particulars that are available up to the time of its submission.

The first confinement case was admitted on the 22nd February, thereafter 38 more women were admitted in the Home till 30th April 1915; the details are as under:—

Wards.	Hindus.	Mussalmans.	Jews.	Native Christians.	Eurasians.	Total.
A	2	...	...	...	...	2
B	1	2	3	...	...	6
C	6	...	...	...	...	6
D	3	...	...	...	...	3
E	3	1	6	8	1	19
G	...	1	...	2	...	3
Total ...	15	4	9	10	1	39

In my Report for 1913, after reviewing the whole question of infant mortality and the measures repeatedly suggested in the past for reducing the waste of infant life, it was mentioned that, in response to the demand made in my Report for 1912, the Corporation had appointed a Committee (Resolution No. 5355 dated the 4th December 1913) " to consider and advise the Corporation as to the best means to be adopted to improve the condition of women during labour and their infants during infant life and as to any other measures for reducing the infant mortality in the City. "

Report of the Committee of the Corporation to suggest measures for the reduction of Infant Mortality

The Committee submitted their Report in August 1914. They observed that the subject of high infant mortality in the City had engaged the un-remitting attention of the Corporation and its Executive Officers for a number of years and as a result of the measures in force during the preceding ten years, the incidence of such mortality had been appreciably reduced, such reduction amounting in 1913 to 17 per cent. of the average of the immediately preceding decennium.

As to the practical remedies suggested, the Committee observed that it was proposed to provide a Maternity Hospital in connection with the projected hospital for the north of the island ; and expressed a hope that the Lady Willingdon Scheme, directed at improving the condition of women in confinement and of their children and the training of midwives, would make it practicable to give skilled assistance during labour to the poor and also supply a sufficient number of trained women for even the poorest classes and thus pave the way for measures to prohibit untrained women from attending confinements.

As regards Milk Depôts, the Committee added, that the Corporation had not yet seen their way to open such depôts themselves, but the milch cattle stable bye-laws had been amended and other measures had been taken and additional powers obtained to ensure a wholesome supply of milk to the people.

The Committee then referred to the scheme of relief in the shape of necessaries given to poor women in confinement during the preceding twelve months and expressed their cordial approval of the proposal for the provision of a small Maternity Home. The Committee's Report concluded with the expression of a hope that the measures enumerated above would lead gradually to an appreciable improvement in the conditions of child life in the City ; and as some of the measures had already had a salutary effect on the infant mortality in the City, the results, when all the remedies were simultaneously at work, would be still more satisfactory.

This Report was approved and adopted by the Corporation under their Resolution No. 4394 of 1st October 1914 and a copy forwarded to the Municipal Commissioner for information and guidance.

Thus terminated the labours of the Committee in what would appear to be a complacent and comprehensive retrospection of the statistical and administrative aspects of infant mortality in the City but without any suggestions as to the best means and measures to be adopted for reducing the waste of infant life.

The Bombay Sanitary Association and the Lady Willingdon Scheme.

Reference was also made to the inception of a scheme by the Bombay Sanitary Association for improving the condition of women during confinement and the care of infants. The un-trained midwife or Dai being one of the most important factors contributing to the high rate of infant mortality, the scheme seeks to bring her in touch with trained nurses and Lady Health Visitors, so that her work could be supervised and the risk to mother and child minimised ; and aims by degrees at bringing the Dais under control and by legislation, on the lines of the Midwives Act of England (1902), at replacing them by a better class.

It was mentioned that, by way of a beginning and with a view to instructing the Dais of the City how to deal with normal cases and to recognise early symptoms of complications, so that they could send for skilled help, lectures and demonstrations were given to them by the District Registrars in the different Municipal Dispensaries; impressing on them the necessity for (1) the cleanliness of hand and person and surroundings, (2) the use of antiseptics, the abolition of the crude and primitive methods in vogue and un-necessary interference with labour, (4) calling in trained aid and (5) reporting every case they attend.

Further developments of the scheme during the year may now be mentioned without entering into the details, which, however, interesting do not fall within the scope of this Report.

In February, a meeting of prominent ladies of the City, interested in improving the condition of women during confinement and the care of infants, was held at Noorbag at which Her Excellency Lady Willingdon presided.

The scheme was explained and outlined and evoked encouraging offers of support. It was decided to appoint for each District or Section of the City a Ladies' Committee to supervise the work of the female Health Visitors who were to be provided to visit daily the homes

of the poor and find out cases requiring advice and help and bring them to the notice of the Committee to be dealt with.

Her Excellency Lady Willingdon was pleased to place herself at the head of the organisation and to invite subscriptions and definite offers of personal service in the shape of work as Lady Presidents and Voluntary Workers.

Subscriptions to the amount of Rs. 20,000 were received during the year through Her Excellency with promises in some instances of further contributions.

In August Her Excellency visited some of the chawls of the poor to personally acquaint herself with the conditions of life and surroundings of the people, especially their women and children.

The ground work having thus been prepared, early in January this year, a meeting of the ladies who offered to assist in working the scheme as Presidents and Voluntary Workers was held at Government House, and Sections of the City in which they agreed to work were allotted to them.

Ten Lady Health Visitors have been appointed and with the two already working make up twelve: as part of their duty, they visit the homes of poor women daily and advise prospective mothers to go to the Municipal Maternity Home for confinement.

The Voluntary Workers of each Section visit some part of their Section daily with or without the Health Visitor and note on the conditions of the room and tenants, and ascertain what women would require assistance and whether these employ their own medical aid or nurse or Dai and bring them to the notice of the Health Visitor for being further dealt with. Special cards are drawn up for this purpose.

A record of the visits thus paid is kept and the work done by the Health Visitor is supervised and a report made at the monthly meeting of the workers presided over by the Lady President of the Section.

Already some good work has been done, thanks to the kindly efforts of the ladies who have interested themselves in the work of ameliorating the lot of the poor women of the City and it may be hoped that a proper co-ordination of these beneficent activities with the efforts of the Health Department and the attractive and comfortable Maternity Home provided by the Municipality will go a great way in reducing the waste of infant life in the City.

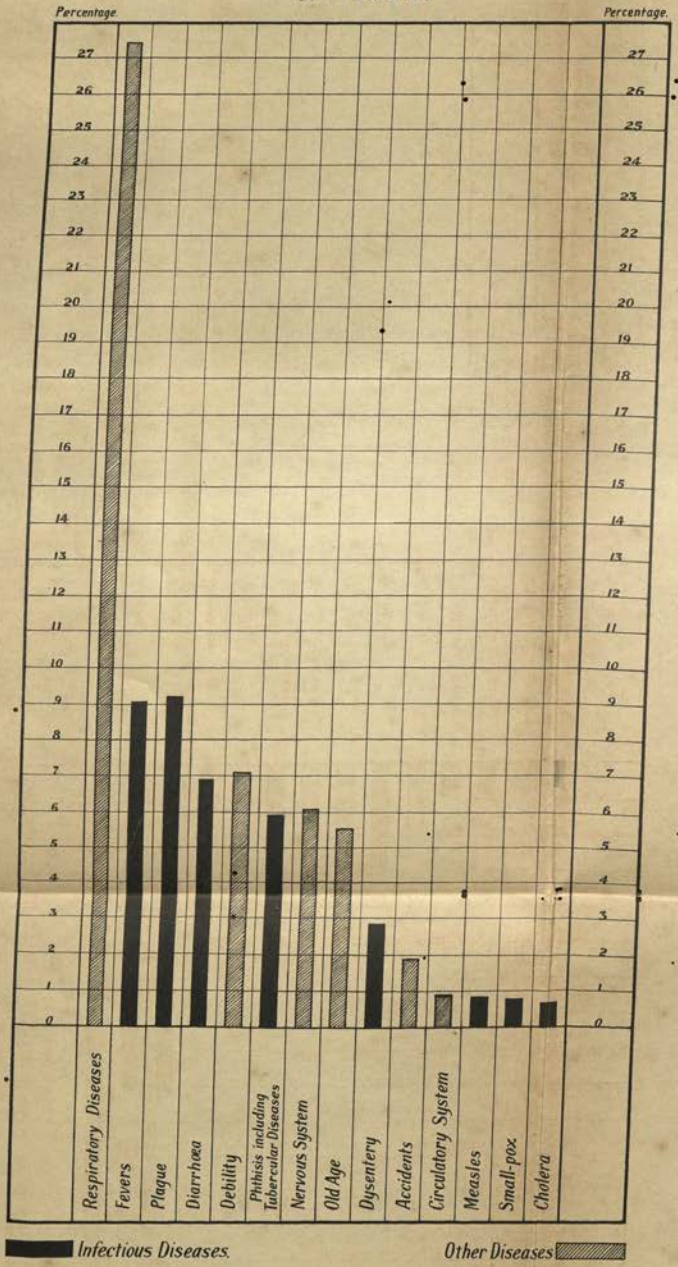
Mortality in Hospitals.

The following Table gives the number of deaths in hospitals from various diseases during 1913 and 1914. The number of such deaths in the year under report was 3,208 against 2,997 in 1913 and their proportion to the total mortality was 10·07 against 9·42 in the previous year.

Causes of Death.	1913.		1914.	
	Hospital Deaths.	Total Mortality.	Hospital Deaths.	Total Mortality.
Still-birth	327	1,592	332	1,561
Small-pox	50	212	75	252
Measles	2	222	3	263
Plague	319	2,609	370	2,941
Fevers	209	3,043	175	2,877
Cholera	19	125	47	221
Diarrhœa and Dysentery	356	3,173	363	3,102
Puerperal Septicæmia...	15	281	14	291
Leprosy	73	90	50	68
Premature Birth	77	181	107	187
Other General Diseases	447	6,796	482	6,949
Diseases of the Nervous System	102	1,965	142	1,935
„ „ Circulatory System	77	354	69	298
Phthisis	256	1,633	359	1,334
Other Diseases of the Respiratory System	493	8,604	480	8,734
Diseases of the Digestive System	209	1,237	194	1,183
„ „ Urinary System	83	298	87	322
„ „ Generative System	38	161	50	147
Other Local Diseases	45	140	41	102
Injuries	127	660	98	608
Unspecified Causes	...	22	2	39
Total (except Still-born) ...	2,997	31,806	3,208	31,853
Percentage to the Total Mortality ...	9·42	...	10·07	...

DIAGRAM

SHOWING PERCENTAGES OF DEATHS FROM PRINCIPAL CAUSES TO THE TOTAL MORTALITY IN BOMBAY IN 1914.



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Principal Causes of Death.

In considering the incidence of the principal causes of death in relation to the total mortality of the City, the Diseases of the Respiratory System will, as usual, appear to have exacted the heaviest toll: 8,734 deaths, being 27·41 per cent. of the total mortality; while Plague occasioned the next higher number of deaths: 2,941 or 9·23 per cent. of the total. The incidence of Fevers was milder than that of either of the foregoing causes, as the disease contributed 2,877 deaths or 9·03 per cent. of the total.

It will thus be seen that Plague is rapidly receding into comparative unimportance year by year; the mortality attributed to it in 1913 was 434 less than that from Fevers, and 5,561 less than that from the Respiratory Diseases; and in the year under review, though it exceeded the mortality from Fevers by 64, it was 5,793 below that from the Diseases of the Respiratory System.

Compared with 1913, the following causes exhibit an appreciable reduction in the death-rate: Fevers from 3·10 to 2·93; Phthisis from 1·86 to 1·55; Diarrhœa from 2·40 to 2·24. The mortality from the Diseases of the Nervous System declined by ·3 and from Accidents by ·5.

Compared, however, with the preceding decennium, the general health conditions of the City, as reflected in the mortality from all causes, reveal a very marked improvement of 9·67 in the death-rate, which if expressed in numbers is equivalent to a saving of 7,727 lives to the City.

The largest reduction appears under Plague, the death-rate from it in 1914 being 3 against the decennial mean of 7·19; among other causes of death, Phthisis shows an improvement of 1·27, Respiratory Diseases of ·60, Fevers of ·58, Small-pox of ·52.

TABLE OF DEATHS AND DEATH-RATES FROM SOME OF THE PRINCIPAL CAUSES OF DEATH IN 1914 COMPARED WITH THOSE IN 1913 AND THE AVERAGE OF THE PRECEDING 10 YEARS.

Causes of Death.	1913.		1914.		Average of 10 years 1904 to 1913.	
	Number of Deaths registered.	Rate of Mortality per 1,000 of Population.	Number of Deaths registered.	Rate of Mortality per 1,000 of Population.	Number of Deaths registered.	Rate of Mortality per 1,000 of Population.
Small-pox	212	·21	252	·25	723	·77
Measles	222	·22	263	·26	388	·41
Fevers (including Scarlet, Enteric, Malaria, Ague, Remittent and Relapsing).	3,043	3·10	2,877	2·93	3,301	3·51
Cholera	125	·12	221	·22	489	·52
Plague	2,609	2·66	2,941	3·00	6,749	7·19
Phthisis	1,828	1·86	1,520	1·55	2,646	2·82
Diseases of the Nervous System ...	1,965	2·00	1,935	1·97	2,082	2·21
„ „ Respiratory System.	8,604	8·78	8,734	8·91	8,926	9·51
Diarrhœa	2,353	2·40	2,201	2·24	2,304	2·45
Dysentery	820	·83	901	·91	1,130	1·20
Accidents	660	·67	608	·62	698	·74
All other causes (except Still-birth).	9,365	9·56	9,400	9·59	10,144	10·81
Total ...	31,806	32·47	31,853	32·52	39,580	42·19

Mortality from Zymotic Diseases.

The death-rate from Zymotic Diseases, which steadily had declined during 1905-1910 from 27·39 to 9·89, rose to 10·49 during the next two years. It then dropped down to 7·47 in 1913 and was thus the lowest since the appearance of Plague.

It was slightly higher in 1914 (7·92).

Compared with the average of the preceding three years, it exhibits an improvement of 1·38, while it was 6·13 lower than the decennial mean.

The mortality from Measles, although 41 more than in 1913, was 98 and 126 below the triennial and decennial averages respectively.

The number of deaths from Dysentery (901) during the year under notice exceeded that for the preceding year by 81 but was 224 less than the triennial mean and 230 below the decennial average. Influenza registered an increase of 2 deaths compared with 1913, Whooping Cough of 1 and Puerperal Septicæmia of 10. The mortality from Diphtheria (2), which was the same as the average of the preceding decennium, was 2 less than in 1913 and the average of the preceding three years.

Other causes have been dealt with in another connection.

TABLE OF MORTALITY FROM ZYMOTIC DISEASES.

	Number of Deaths registered from Zymotic Diseases.			
	1913.	1914.	Average of the last three years (1911—1913).	Average of the last ten years (1904—1913).
Small-pox	212	252	545	723
Measles	222	263	361	389
Plague	2,609	2,941	2,777	6,749
Scarlet Fever	.....	...	...	
Enteric Fever	154	147	150	
Malarial Fever	261	213	318	3,301
Ague and Remittent Fever	2,624	2,517	2,784	
Relapsing Fever	4	...	5	
Influenza	1	3	4	3
Whooping Cough	9	10	12	16
Diphtheria	4	2	4	2
Cholera	125	221	679	489
Dysentery	820	901	1,125	1,131
Puerperal Septicæmia	281	291	346	379
Total ...	7,326	7,761	9,110	13,182
Death-rate per 1,000 of population ...	7·47	7·92	9·30	14·05

Mortality by Races.

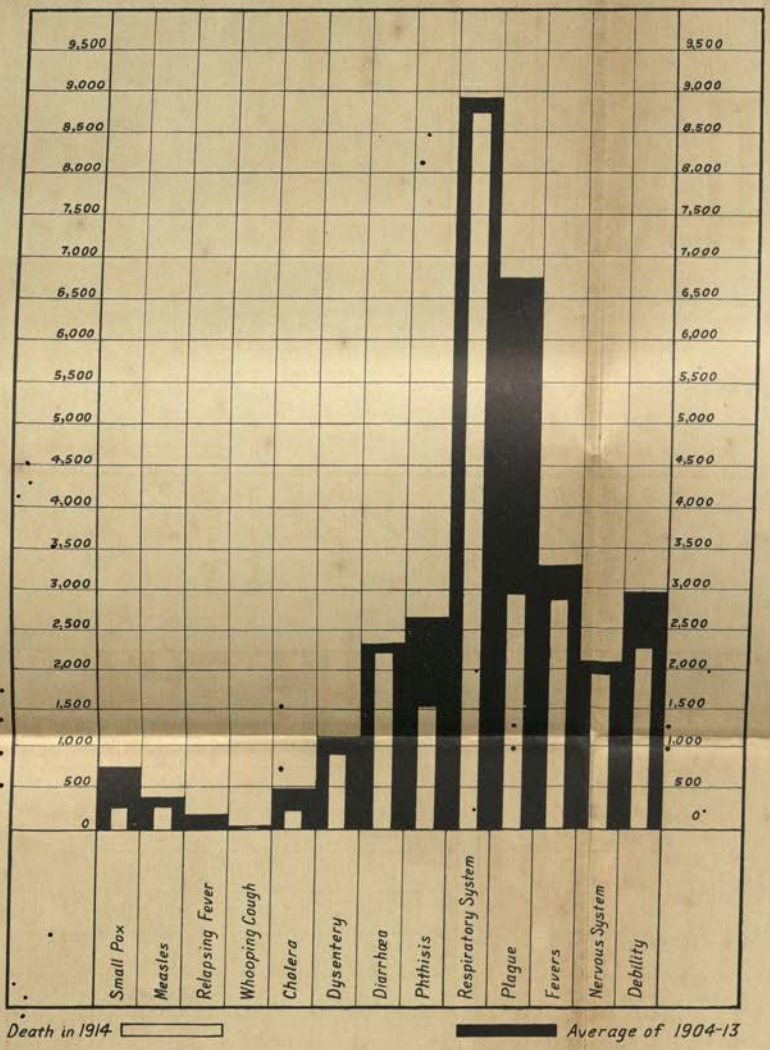
In considering the relative incidence of mortality among the different races inhabiting the City, it will be observed on scrutiny of the figures given in the following Table that, with the exception of Hindus, low caste, and Lingaits (who retained the same death-rate), all the other sub-castes of the Hindu community exhibit improvement in the death-rates, as compared with the preceding year; whereas all the other races, with the exception of Parsees, and Buddhists who number only 578 and form a negligible portion of the population, registered enhanced death-rates.

Communal Death-rates.

The general death-rate was 32·52, a trifle higher than in 1913, when it was 32·47. Taking Hindus as a whole, Mussalmans (40·76) and Native Christians (34·28) of all the communities registered a higher rate. Among Hindus, (as well as all the communities), Lingaits, who number only 1,779 by the Census of 1911, returned the highest death-rate (117·89) as in 1913; next Hindus, low caste (72·05); then Jains (59·33); that among Brahmins was the lowest (21·37).

DIAGRAM

NUMBER OF DEATHS FROM THE ZYMOTIC AND OTHER DEATH CAUSES IN 1914, COMPARED WITH THEIR AVERAGES OF THE PRECEDING 10 YEARS.



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Europeans, as usual, returned the lowest death-rate (18·32), higher, however, than in 1913 (16·47); their largest contribution to mortality was under Fevers (38 deaths, ratio 3·19) and Respiratory Diseases (25 deaths, ratio 2·10). Of all the communities they paid the heaviest toll to the following diseases:—Enteric Fever (2·27 : 27 deaths): Dysentery (1·93 : 23 deaths): Accidents (1·17: 14 deaths) and Malaria (·84 : 10 deaths); whereas Measles (·08), Plague (·16); Ague and Remittent Fever (·08), Diarrhœa (·58) and Phthisis (·42) were least fatal to them. Among Parsees the death-rate was the next lowest (22·32); they suffered most from Respiratory Diseases (4·00 : 204 deaths); Fevers (2·10: 107 deaths) and Diarrhœa (1·47 : 75 deaths); Malaria and Accidents in equal proportion (·53 : 27 deaths). They contributed least of all communities to the mortality from Small-pox (·03 : 2 deaths), Fevers (2·10 : 107 deaths): and Dysentery (·54 : 28 deaths): Jews who returned the next higher rate (27·73) suffered from Diarrhœa (2·88 : 19 deaths) more than other communities and most from Respiratory Diseases (4·85 : 32 deaths) after Eurasians (5·49 : 23 deaths): Enteric and Cholera in equal proportion (·30: 2 deaths). They paid heavy toll also to Fevers (2·57 : 17 deaths), chiefly Ague and Remittent Fever (2·27 : 15 deaths).

Eurasians recorded the next higher rate of mortality (28·41): the most fatal causes of death among them being Respiratory Diseases (5·49 : 23 deaths): then Fevers (3·10 : 13 deaths): Diarrhœa (2·38: 10 deaths): Enteric (1·67 : 7 deaths) was less fatal to them than to Europeans and Buddhists.

There was no death from Small-pox among them as among Jews and Buddhists, and only 1 from Measles and Cholera.

Hindus stand next with the death-rate of 31·30; they succumbed more than any other race to Plague (3·56), Ague and Remittent Fever (2·72) and Measles (·30): and to Respiratory Diseases (9·05) more than to any other. They suffered heavily also from Fever (2·95), Diarrhœa (2·15) and Phthisis (1·32): Small-pox (·25) was more fatal to Hindus than t any other community except Europeans, who registered the same rate, and Native Christiano (1·01).

The death-rate among Native Christians was the next higher (34·28); Fevers (3·51), Cholera (·53) and Small-pox (1·01) were more fatal to them than to any other community; their great susceptibility to the latter disease being generally due to their not being protected by vaccination in infancy; they paid heavy toll also to Plague (2·47) and Respiratory Diseases (7·19); Diarrhœa (2·44); Phthisis (2·01) caused more deaths among them than in any other community except Mussalmans.

Mussalmans, as usual, recorded the highest communal death-rate (40·76 against 39·00 in 1913). For an explanation we may turn to Table 30 appended to this Report, from which it will be observed that their contributions to total mortality were the heaviest, compared with other communities, under Phthisis (2·74) and Respiratory Diseases (10·83). This may chiefly be attributed to the fact that Mahomedan localities in the City are generally among the most congested areas and to social customs which in effect deny to Mahomedan females the benefits of open air. There was also a higher proportion of deaths among them than in any other community, except Hindus, from Ague and Remittent Fever (2·68); and except Jews from Diarrhœa (2·86), and except Europeans from Dysentery (1·19) and Accidents (·70).

To sum up, the incidence of some of the principal diseases was as under:—

Caste or Race.	Respiratory Diseases.	Phthisis.	All Fevers.	Enteric.	Malaria.	Plague.	Small-pox.
Hindus	9·05	1·32	2·95	·07	·16	3·56	·25
Mussalmans	10·83	2·74	2·95	·04	·22	1·85	·17
Parsees	4·00	·43	2·10	·56	·53	1·11	·03
Jews	4·85	·90	2·57	·30	...	·60	...
Native Christians	7·19	2·01	3·51	·60	·48	2·47	1·01
Europeans	2·10	·42	3·19	2·27	·84	·16	·25
Eurasians	5·49	1·19	3·10	1·67	·47	·95	...

Compared with the mean of the preceding decennium, we find that (1) all communities except Europeans registered an enormous reduction in the death-rate in 1914: equal to 11·21 among Mussalmans; 10·13 among Hindus of all castes together; 8·98 among Native Christians; 4·18 among Parsees; 5·92 among Jews and 2·13 among Eurasians; (2) the improvement in the general death-rate which has followed being 9·67, equivalent to a saving to the City of 7,727 lives.

As to the European death-rate, it may be mentioned that it was 26·92 in 1900—the highest since 1878 (31·98). In 1901, it dropped to 15·39. During following thirteen years, it exhibited considerable fluctuations from year to year, registering the highest ratio (21·99) in 1902 and the lowest (14·81) in 1909. It was 18·32 in 1914.

The European population as enumerated in 1911 (11,894) was lower than that at either of the previous enumerations: 12,273 in 1901 and 14,374 in 1906.

TABLE SHOWING BY CASTE THE NUMBER OF DEATHS AND THE DEATH-RATE FROM ALL CAUSES IN 1913 AND 1914 AND THE AVERAGE OF THE PRECEDING 10 YEARS. (1904—1913.)

Race or Caste.	1913.		1914.		Average of last ten years (1904—1913).	
	Number of Deaths.	Rate of Mortality per 1,000 of Population.	Number of Deaths.	Rate of Mortality per 1,000 of Population.	Number of Deaths.	Rate of Mortality per 1,000 of Population.
Hindus. Jains	1,349	65·93	1,214	59·33	...	...
Hindus. Brahmins	1,159	21·60	1,147	21·37	...	...
Hindus. Lingaits	139	117·89	139	117·89	...	...
Hindus. Bhatias	248	31·87	234	30·07	...	...
Hindus. Hindus of other Castes	15,141	27·67	14,784	27·01	...	...
Hindus. Hindus, Low Caste	3,816	79·36	3,908	72·05	...	...
Hindus, all Castes	21,852	31·92	21,426	31·30	27,471	41·43
Mussalmans, including Negro-Africans	6,996	39·00	7,311	40·76	8,799	51·97
Parsees	1,145	22·48	1,137	22·32	1,297	26·50
Jews	159	24·10	183	27·73	193	33·65
Native Christians	1,332	32·27	1,415	34·28	1,446	43·26
Eurasians	86	20·53	119	28·41	118	30·54
Europeans	196	16·47	218	18·32	229	17·33
Buddhists	17	29·41	11	19·03	11	27·91
Other and unknown castes	23	...	33	242·64	16	213·33
Total	31,806	32·47	31,853	32·52	39,580	42·19

Mortality by Months.

The following Table indicates the monthly variations in mortality. It will be observed that, as compared with 1913, the mortality during the first eight months of the year was higher month for month (except in May when it was 101 less) resulting in a total increase of 1,809 deaths for the period. From September, however, the relative proportions were reversed in favour of the year under report, and the mortality steadily and rapidly declined until it fell in November to 1,773 which was the lowest monthly mortality registered in any year since 1893 and 605 less than in the same month of 1913. It rose, however, to 1,893 in December, the resultant decrease during the four months being 1,762

2,975 deaths were recorded in January—292 higher than in 1913: this high figure is explained by the mortality registered from Ague and Remittent Fever (278) which was higher than in any other month except March (311) and April (281), from the Diarrhœal Diseases (327) and Debility (224) which was in excess of that in any other month except August (359 and 249); while the mortality from Respiratory Diseases (900) was lower only than that registered in February (903) and March (1,020). It may also be mentioned that Puerperal Septicæmia also caused the largest number of deaths in this month.

The mortality fell to 2,886 in February but was still 445 higher than in 1913: the month was marked by high mortality from Measles (60), Ague and Remittent Fever (270), Respiratory Diseases (903), and other general diseases (210): and the highest from Old Age (193) during the year.

March, April and May are generally the unhealthiest months of the year, when Plague, Small-pox, Measles and Respiratory Diseases are at their worst. April registered the maximum monthly mortality as usual and an increase of 386 over the same month in 1913. The excess

of 416 in March compared with 1913 is accounted for largely by increases registered under Ague and Remittent Fever (+72), Respiratory Diseases (+180) and Measles (+18). In April, Plague registered the largest number of deaths (1,135), being 255 more than that in 1913. So also did the Diseases of the Nervous System (203), Phthisis (138) and other General Diseases (225); Respiratory Diseases registered an increase of 63.

May witnessed a decline of 101 deaths below the figure for 1913, inspite of 92 more deaths from Plague.

The disease was epidemic from the week ending 28th February to that ending 13th June 1914, and during the four months from March to June caused 364 more deaths than in the corresponding period of 1913.

Compared with the successive annual epidemics since 1896, that of 1914 (2,941) was the least severe after those of 1912 (1,717) and 1913 (2,609).

Passing on to the month of June, the excess of 107 deaths is accounted for by the increases recorded under Respiratory Diseases (+89), Puerperal Septicæmia (+15), Diarrhœal Diseases (+21) and Old Age (+18); though these were to a certain extent discounted by the decreases of 55 under Ague and Remittent Fever and 25 under the Diseases of the Digestive System.

The increase registered in July over the corresponding month of 1913 was inconsiderable (+26); but that in August (+238) was too large to be passed over; Respiratory Diseases alone were responsible for 101 more deaths, Diarrhœal Diseases for 51, Old Age 24.

During the next three months of the year, the mortality declined with surprising rapidity; the decreases recorded being larger each succeeding month; September (—142), October (—460), November (—605). December witnessed a slight rise; still the mortality was 555 less than in 1913 and lower than in any previous month with the exception of November which recorded the lowest figure.

This interesting decline may be illustrated with the following details:—

TABLE OF MORTALITY IN 1914, INDICATING DECREASES COMPARED WITH 1913.

	Ague & Remittent Fever.	Diarrhœal Diseases.	Debility.	Phthisis.	Respiratory Diseases.
September	175 (—44)	267 (—38)	200 (—49)	100 (—39)	...
October	167 (—73)	181 (—61)	199 (—24)	114 (—47)	516 (—101)
November...	130 (—93)	185 (—30)	182 (—31)	97 (—47)	489 (—196)
December...	144 (—60)	213 (—70)	160 (—49)	...	486 (—252)

I have already dealt with the suggestion, which these figures might appear to support, that the diminished mortality is attributable to the temporary decrease in population from an exodus due to the closure of a large number of mills in the City and other abnormal conditions engendered by the outbreak of War.

TABLE OF DEATHS (EXCLUSIVE OF STILL-BIRTHS) FROM ALL CAUSES BY MONTHS IN 1913 AND 1914.

MONTHS.	Number of Deaths in 1913.	Number of Deaths in 1914.
January	2,683	2,975
February	2,441	2,886
March	3,074	3,490
April	3,535	3,921
May	3,459	3,358
June	2,274	2,381
July	2,327	2,353
August	2,464	2,702
September	2,305	2,163
October	2,418	1,958
November	2,378	1,773
December	2,448	1,893
TOTAL...	31,806	31,853

Mortality by Sections.

The general death-rate for the whole City is 32·52 against 32·47 in 1913.

The only Sections which exhibit improvement of any note in the death-rate, compared with 1913, are Middle and Lower Colaba 26·67 (against 30·79 in 1913), Mandvi 31·47 (against 35·87), Dongri 30·31 (against 36·70), Market 21·41 (against 26·31), Parel 29·07 (against 31·05) and Worli 29·81 (against 31·52).

The following Sections recorded rates higher than the general death-rate :—

Upper Colaba (44·31), Fort Northern (35·15), Esplanade (35·02), Chukla (35·03), Umarkhadi (44·41), Bhuleshwar (33·16), Khara Talao (39·99), Kumbharwada (35·51), Mazagon (39·60), Tarwadi (51·43), 2nd Nagpada (40·80), Kamathipura (41·44), Tardeo (36·24), Byculla (38·10), Sewri (34·17), Sion (33·89) and Mahim (36·23).

All the Sections of D Ward, it is remarkable, registered death-rates much below the general death-rate of the City.

This pre-eminence must be attributed in a very great measure to the enormous improvements which have in very recent years been carried out by the City Improvement Trust. Many of the worst insanitary places and dark, ill-ventilated houses, which were hot-beds of disease, have been wiped out and narrow tortuous lanes widened into broad roads which are now studded with stately buildings constructed on most modern lines.

It is necessary to mention here that the high death-rates of certain Sections are only apparently so : (1) Upper Colaba (44·31) reveals a large decrease in population as enumerated in 1911 (from 3,775 in 1906 to 1,557), owing chiefly to the exclusion of the Military included in previous enumerations (1901 and 1906); Esplanade (35·02), Tarwadi (51·43), and Byculla (38·10)—these Sections contain Hospitals and should exhibit a much lower rate, but for the fact that, for want of residential addresses of several patients dying in the Institutions, the deaths have to be referred to the Sections containing the Hospitals instead of to those from whence they come. Esplanade contains the St. George's, Cama and Allbless, Goculdas Tejpal and the Parsi Lying-in Hospitals ; also the Lady Hardinge War Hospital. Sir Jamsetji Jeejeebhoy, Bai Motlabai and D. M. Petit and the Maratha Hospitals and St. Joseph's Foundling Home are in Tarwadi and the Arthur Road Infectious Diseases Hospital in Byculla.

The lowest death-rate was returned for Fort Southern (15·86), which is purely a business locality and not residential and the highest (51·43) for Tarwadi, which contains Sir Jamsetji Jeejeebhoy, Bai Motlabai and D. M. Petit and the Maratha Hospitals and St. Joseph's Foundling Home.

The following Sections exhibit a marked improvement in the death-rates when compared with the averages of the preceding quinquennium (1909-1913):—

Section.	Death-rate. (1914).	Mean Death-rate. (1909-1913.)
Esplanade	35·02	43·35
Mandvi	31·47	38·53
Chukla	35·03	40·86
Dongri	30·31	41·81
Market	21·41	27·64
Khara Talao	39·99	45·27
Girgaum	27·58	33·16
Tarwadi	·51·43	56·30
Second Nagpada	40·80	48·19
Kamathipura	41·44	46·96
1st Nagpada	31·18	36·85

If we turn to Table 3 appended to this Report, we shall find it explain the relative incidence of diseases in the different Sections of the City.

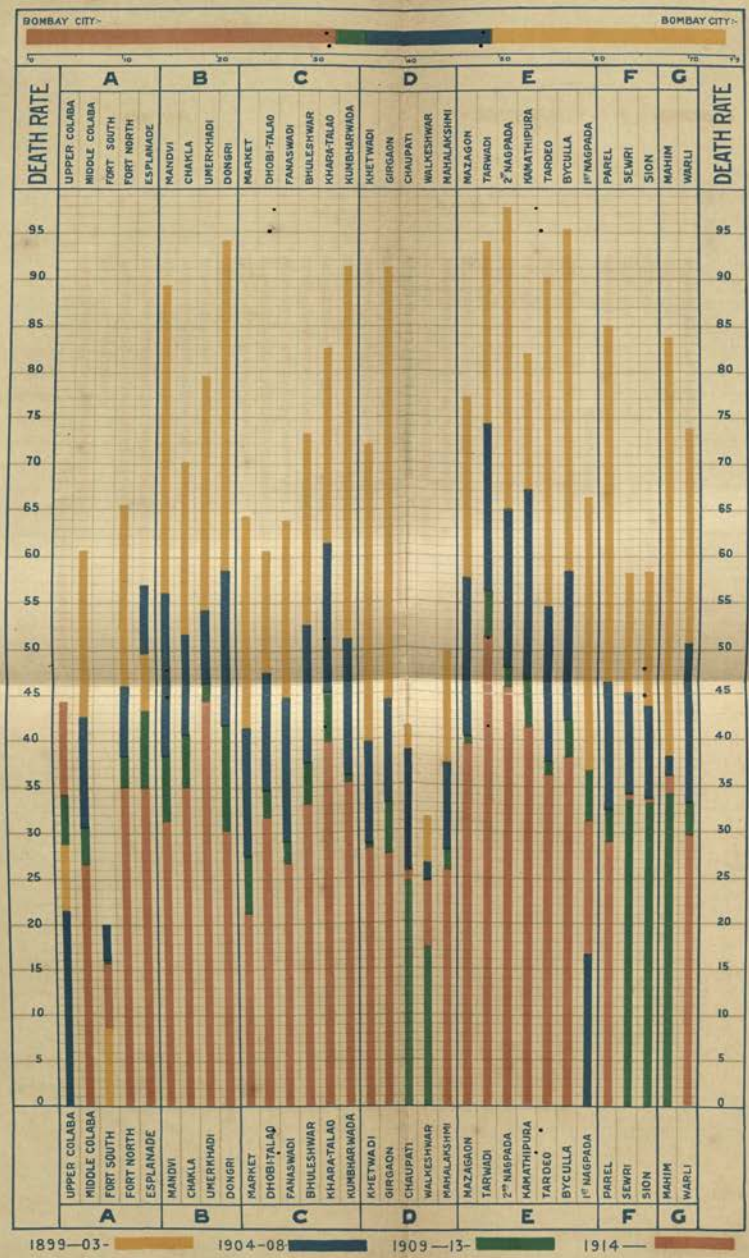
It will be observed that Cholera was worst in Sion (·78), Mazagon (·53), Chowpati (·43), Esplanade (·39) and Byculla (·38); Small-pox in Girgaum (·58), Middle and Lower Colaba (·55), Dhobi Talao (·49), Worli (·45) and Sewri (·41). Measles was more prevalent in Fanaswadi (·65), Mahim (·49), Khara Talao (·47), Umarkhadi (·41), Dongri and Tardeo (·40) than in other Sections, whereas Upper Colaba, Middle and Lower Colaba, Fort North and Chowpati were quite free from it. The Sections which suffered most from Plague were Sewri (6·87), Mazagon (5·12), Middle and Lower Colaba (4·87), Sion (4·43), Mahim (4·39), Mahalakshmi (4·06) and Mandvi (3·94).

The incidence of Malaria was more marked in Esplanade (1·29), Upper Colaba (·64), Fort North (·62) and Middle and Lower Colaba (·55).

DIAGRAM

SHOWING

DEATH-RATE (PER 1000 OF POPULATION) IN BOMBAY CITY AND ITS SECTIONS 1899-1914.



Litho. Shri Narayan P. Press, Khetwadi Main Rd. Bombay.

Diarrhœal Diseases levied the heaviest toll in Upper Colaba (7·70), Tarwadi (7·24), Esplanade (6·36), Mahim (5·28), Mazagon (5·22) and Sewri (5·03).

Tubercle of Lungs and Tubercular Diseases registered the highest death-rate in Kamathipura (5·36), Chukla (4·20), Upper Colaba (3·85), Umarkhadi (3·54), Tardeo (3·49), Khara Talao (3·22), Khetwadi (3·19), Esplanade (3·15), 1st Nagpada (3·11) and Kumbharwada (3·10).

The following Sections suffered most from the Diseases of the Respiratory System:—Upper Colaba (12·84), Umarkhadi (12·80), 2nd Nagpada (11·65), Byculla (11·49), Tarwadi (11·46), Chukla (11·34) and Fort Southern (10·69).

TABLE SHOWING THE DEATH-RATE FROM ALL CAUSES IN 1913 AND 1914 AND THE MEAN OF THE PRECEDING FIVE YEARS (1909-1913.)

Ward.	Sections.	1913.	1914.	Mean death-rate (1909-1913).
A	Upper Colaba	35·96	44·31	34·36
	Middle and Lower Colaba	30·79	26·67	30·95
	Fort, Southern	11·55	15·86	16·14
	Fort, Northern	34·01	35·15	38·50
	Esplanade	35·07	35·02	43·35
B	Mandvi	35·87	31·47	38·53
	Chukla	36·97	35·03	40·86
	Umarkhadi	42·97	44·41	46·38
	Dongri	36·70	30·31	41·81
C	Market	26·31	21·41	27·64
	Dhobi Talao	28·46	31·87	34·98
	Fanaswadi	25·80	26·78	29·10
	Bhuleshwar	33·16	33·16	37·87
	Khara Talao	39·47	39·99	45·27
	Kumbharwada	35·55	35·51	36·35
D	Khetwadi	27·64	28·14	28·96
	Girgaum	28·49	27·58	33·16
	Chowpati	23·07	25·88	24·56
	Walkeshwar	19·26	24·81	17·45
	Mahalakshmi	26·80	25·96	28·08
E	Mazagon	36·50	39·60	40·30
	Tarwadi	52·03	51·43	56·30
	Second Nagpada	40·59	40·80	48·19
	Kamathipura	40·21	41·44	46·96
	Tardeo	36·60	36·24	37·94
	Byculla	37·67	38·10	42·18
	First Nagpada	27·43	31·18	36·85
F	Parel	31·05	29·07	32·75
	Sewri	32·20	34·17	33·58
	Sion	31·48	33·89	33·12
G	Mahim	34·73	36·23	34·19
	Worli	31·52	29·81	33·27
	Harbour and Docks Railways and Homeless	1·95	03·75	3·33
	Total	32·52	32·47	35·86

Mortality by Place of Birth.

Of the total number of 31,853 deaths in the entire population during the year, 42·02 per cent. or 13,384 deaths occurred among persons born in Bombay, 54·40 or 17,327 among those born outside it; and 3·58 or 1,142 deaths were of persons whose place of birth could not be ascertained.

Plague

Plague appeared in the City in the latter half of 1896; the year under review is thus the 19th year of its continuous presence with us. During this period, the mortality from the disease rose to the appalling figure of 20,788 in 1903 and dropped down to 1,717 in 1912.

Starting from 1897, it will be observed that Plague mortality has been marked by a persistent ebb and rise during alternate years until 1906 is reached; with the exception, however, of 1900, when the fall warranted by the course of the mortality in previous years did not occur.

The year 1906 ushered in a quinquennium of uninterrupted decline until 3,656 was touched in 1910; this was the lowest figure in the history of the disease until we come to 1912, when the mortality from Plague fell to 1,717.

The year under review presents a parallel to 1900, in that the mortality exhibited a further rise on that of the immediately preceding year.

The year 1906 is interesting for another reason. It marks the beginning of a period during which Plague receded steadily into the background yielding its place of preponderance in the death-roll of the City to the Diseases of the Respiratory System, which still retain it.

Year.	Mortality from	
	Plague.	Respiratory Diseases.
1906	10,823	11,731
1907	6,389	9,022
1908	5,361	8,954
1909	5,197	7,974
1910	3,656	8,212
1911	4,006	8,640

And in 1912, when the mortality from Plague was the lightest experienced, it was overshadowed by the mortality from other causes also.

	Plague.	Respiratory Diseases.	Nervous Diseases.	Fevers.	Tuberculosis.
1912	1,717	9,686	2,236 Debility 2,104	3,585	2,794 Other General Diseases 2,621
1913	2,609	8,604	.....	3,043	.....
1914	2,941	8,734	.....	.....	.....

I have, in my previous Reports, pointed out that, notwithstanding the enormous and steady reduction of Plague mortality in successive years, a corresponding abatement in virulence has not followed. For example, in 1912 which witnessed the lowest Plague mortality, the case-mortality was 88·68, next only to that in the most fatal years in the history of the disease: 1901 (89·19) and 1903 (89·05) when 59,495 and 50,513 deaths from all causes were registered. But in 1913 there was an appreciable reduction in case-mortality (86·30), the lowest since 1902 (84·15), which registered 48,414 deaths from all causes and 13,820 from Plague.

In the year under review, the case-mortality was 87·84—nearly the same as in 1906 (87·82), when 52,874 deaths were registered from all causes and 10,823 from Plague; it is the lowest since 1908 (87·39), except 1903 (86·30).

TABLE SHOWING THE NUMBER OF ATTACKS AND DEATHS FROM PLAGUE SINCE 1896 AND THE TOTAL MORTALITY, EXCLUDING STILL-BORN, SINCE 1891.

Years.	Number of Plague Attacks.	Number of Plague Deaths.	Death-rate from Plague per 1,000 of Population.	Percentage of Deaths to Attacks.	Number of Deaths from all causes (exclusive of Still-born).	Total Death-rate per 1,000 of Population.
1891	...	...	...	...	23,847	29·01
1892	...	...	...	...	26,518	32·26
1893	...	...	...	...	23,142	28·16
1894	...	...	...	...	27,330	33·25
1895	...	...	...	...	25,081	30·52
1896	2,544	1,936	2·36	76·10	33,451	40·71
1897	13,314	11,003	13·39	82·64	47,896	58·28
1898	22,130	18,185	22·12	82·17	51,961	63·23
1899	19,451	15,796	19·22	81·20	56,434	68·07
1900	17,913	13,285	16·16	74·16	79,350	96·55
1901	21,006	18,736	24·14	89·19	59,495	76·66
1902	16,423	13,820	17·80	84·15	48,414	62·38
1903	23,344	20,788	26·78	89·05	50,513	65·09
1904	15,488	13,538	17·44	87·40	42,676	54·99
1905	16,308	14,198	18·29	87·06	47,762	61·54
1906	12,323	10,823	11·06	87·82	52,874	54·07
1907	7,353	6,389	6·53	86·88	38,687	39·56
1908	6,134	5,361	5·48	87·39	38,271	39·13
1909	5,864	5,197	5·31	88·62	34,878	35·66
1910	4,130	3,656	3·73	88·52	34,933	35·72
1911	4,503	4,006	4·09	88·96	34,961	35·69
1912	1,936	1,717	1·75	88·68	38,954	39·77
1913	3,023	2,609	2·66	86·30	31,806	32·47
1914	3,348	2,941	3·00	87·84	31,853	32·52

Plague by Months.

The monthly variations of Plague mortality are indicated in the following Statement from which it will be observed that, as compared with 1913, it was higher from January to July except in February, when it was nearly the same, resulting in a total increase of 386 deaths; each of the last five months of the year, however, registered a smaller number of deaths—the total decrease being equal to 54 deaths. Thus the result was an increase of 332 during the year.

The number of deaths from Plague rose rapidly from 59 in January to the maximum of 1,135 in April against 880 in 1913; then steadily declined during the succeeding months to (5) in December: this was the lowest monthly figure ever reached in the history of the disease.

Plague was epidemic from the week ending 28th February till that ending 13th June. It was at its highest during the week ending 2nd May, which recorded 376 deaths.

Plague was worst in April, as usual, and recorded 1,309 seizures and 1,135 deaths against 1,011 seizures and 880 deaths in 1913. The lowest number of seizures registered in a month was 5 in December: all of them proved fatal. The monthly minimum in 1913 was 13 attacks and 8 deaths.

The highest number of seizures recorded on a single day was 77 attacks on the 2nd May (against 50 on the 11th April and 3rd May in 1913) and the highest number of deaths was 65 on the same day (against 41 on the 30th April and 3rd May in 1913).

MONTHS.	Plague Deaths in 1913.	Plague Deaths in 1914.
January	41	59
February	122	119
March	456	465
April	880	1,135
May	729	821
June	139	147
July	79	83
August	60	55
September	41	35
October	33	10
November	21	7
December	8	5
Total ...	2,609	2,941

Table showing the Daily Number of Attacks and Deaths from Plague and the Total Mortality excluding Still-born in 1914.

Date.	January.			February.			March.			April.			May.			June.			July.			August.			September.			October.			November.			December.		
	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.
1	1	..	89	4	4	109	6	4	99	28	24	129	56	54	145	11	8	84	8	8	79	2	2	73	1	2	99	3	3	83	..	..	62	..	..	54
2	2	1	93	4	5	106	5	6	109	34	27	113	77	65	144	17	10	76	9	4	69	2	2	77	1	1	64	1	1	72	..	..	67	1	1	49
3	..	1	100	6	1	83	11	10	115	44	36	134	57	57	149	10	14	91	2	2	69	3	2	104	1	3	84	..	..	58	..	..	56	..	..	65
4	1	..	86	8	6	104	9	9	111	40	33	145	41	52	141	8	7	90	5	4	74	1	1	73	3	1	80	..	..	64	..	..	76	..	..	64
5	1	..	94	..	1	117	9	8	124	28	29	110	66	62	153	9	10	97	..	1	63	4	4	82	2	2	83	..	..	61	..	..	69	..	..	57
6	3	4	84	1	..	101	12	10	111	39	34	124	44	35	124	4	5	85	1	3	77	..	..	101	3	2	73	..	..	62	1	..	69	..	..	56
7	2	1	98	4	3	84	19	13	111	43	33	150	47	42	136	8	7	101	5	7	81	3	1	85	2	1	68	..	..	67	..	..	62	..	..	59
8	1	2	94	4	4	92	10	10	110	34	29	141	35	27	108	15	10	96	1	1	59	..	1	89	4	4	67	1	..	60	..	..	80	..	..	87
9	1	1	101	4	3	109	17	13	89	46	40	130	52	49	140	14	10	97	3	1	92	1	1	87	..	1	59	1	1	54	..	..	59	1	1	77
10	1	1	89	2	2	115	8	11	96	36	30	128	32	26	108	5	4	82	3	2	73	3	3	102	1	1	76	2	3	61	..	..	58	..	..	59
11	..	..	81	3	5	97	12	13	116	38	38	138	26	25	113	12	9	84	3	2	69	1	..	83	..	..	76	..	..	58	..	1	71	1	1	65
12	2	2	95	9	8	105	11	9	107	44	32	127	32	30	115	5	2	70	5	5	79	1	..	68	1	..	75	..	..	72	2	..	52	..	..	64
13	1	1	96	5	3	82	14	10	87	36	39	130	32	25	115	5	3	96	1	2	74	2	2	101	..	..	62	..	..	67	..	..	68	..	..	58
14	3	3	36	..	..	99	17	16	114	40	35	121	25	24	107	4	7	76	3	2	80	1	..	70	1	3	60	..	..	51	..	..	60	..	..	64
15	5	4	118	1	3	86	25	19	121	37	33	111	26	20	86	3	3	68	6	2	73	3	2	96	1	1	82	..	..	56	..	..	44	..	..	61
16	1	1	89	3	4	102	10	16	129	48	36	121	18	19	95	3	1	69	4	5	75	5	5	118	..	..	55	1	..	56	1	2	56	..	..	55
17	4	2	97	6	6	109	15	14	107	47	41	123	16	16	90	5	4	60	..	1	85	..	..	86	..	..	66	..	..	73	..	..	57	..	..	56
18	2	2	95	3	2	88	19	20	115	49	42	119	20	19	108	4	3	64	4	4	73	3	2	87	..	1	94	..	..	62	1	1	54	..	..	58
19	1	1	106	5	5	109	23	13	113	47	45	147	21	16	88	3	3	81	3	1	83	7	5	73	1	..	76	1	1	60	..	1	43	..	..	52
20	7	7	99	7	7	109	22	17	100	32	38	121	15	12	84	2	1	73	3	3	75	2	1	90	1	1	56	..	..	52	2	...	65	..	..	50
21	1	1	86	4	4	122	17	15	124	41	37	128	12	11	85	5	4	66	1	..	53	3	2	87	..	..	78	..	..	69	..	..	67	..	..	64
22	1	1	82	7	6	107	17	13	112	48	42	129	23	20	96	3	5	80	2	2	87	3	3	99	1	1	66	..	..	65	..	1	50	..	..	62
23	6	1	117	5	5	103	19	17	119	42	33	121	20	16	94	4	4	85	..	1	85	3	..	91	1	1	71	..	..	50	..	..	43	..	..	54
24	6	4	87	9	7	118	18	13	129	47	40	127	21	18	85	3	2	76	4	3	74	2	3	89	2	2	70	..	..	61	..	..	66	..	..	56
25	3	3	105	8	8	119	17	15	99	49	34	127	13	10	94	2	2	72	3	2	67	5	6	83	3	1	82	..	..	66	..	..	51	..	..	49
26	3	3	119	4	2	103	22	17	111	54	48	141	12	11	97	3	3	76	..	..	74	1	1	83	..	..	88	1	1	65	..	..	50	..	..	78
27	1	2	96	11	6	108	34	28	142	54	53	147	13	12	93	2	3	63	3	4	97	..	..	90	3	3	76	..	..	64	..	..	43	..	..	70
28	3	3	101	7	9	94	18	22	116	62	57	132	11	13	85	2	1	79	3	2	69	4	2	73	2	1	59	..	..	68	1	1	50	..	1	69
29	4	1	114	..	..	..	31	32	128	63	55	156	22	14	91	1	1	67	2	2	88	5	2	81	..	1	52	..	..	63	..	..	57	1	..	73
30	3	3	86	..	..	..	22	22	106	59	42	148	17	16	106	4	1	83	2	2	64	1	2	87	1	1	66	..	..	63	..	..	68	1	..	56
31	2	3	92	..	..	..	36	25	120	..	..	..	5	5	83	..	..	..	4	5	93	1	..	99	..	..	..	..	..	75	..	..	..	..	1	61
Total ..	72	59	2,975	134	119	2,886	525	465	3,490	1,309	1,135	3,921	907	821	3,858	176	147	2,381	93	83	2,858	72	55	2,702	36	35	2,163	11	10	1,958	8	7	1,773	5	5	1,893

Total in 1914.		
Attacks.	Deaths.	Total Mortality.
3,348	2,941	31,853

Plague by Races.

Of the 2,941 deaths from Plague during the year under report, 2,439 occurred among Hindus of all classes against 2,160 in 1913; while 333, against 296 in the preceding year, were registered among Mussalmans including Negro-Africans. Native Christians contributed 102 and Parsees 57 against 98 and 43 respectively in 1913: the small balance of 10 sums up the deaths among Jews (4), Eurasians (4) and Europeans (2); in the preceding year there was no death from Plague among Eurasians and 7 among Jews and 4 among Europeans.

Buddhists registered no death from the disease, as in 1913.

As in previous years, Plague was most fatal to Hindus, who returned the death-rate of 3·56: next, to Native Christians, with the ratio of 2·47; then Mussalmans (1·85), Parsees (1·11), Eurasians (·95) and Jews (·60). The lowest death-rate was returned by Europeans (·16) as usual.

Plague by Sex and Age.

The sex distribution of Plague mortality in the year was 2,047 males and 894 females; the ratio per 1,000 of sex population being males 3·19 and females 2·63 against 2·76 and 2·46 in 1913.

The proportion of male deaths to female was 2·2 to 1 in the entire population, as among Hindus of all Castes; as 3·3 to 1 among Mussalmans (including Negro-Africans), 1·2 to 1 among Parsees; but it was 3 to 1 among Eurasians, 2 to 1 among Native Christians and 1 to 1 among Jews and Europeans.

The disease was most fatal to persons between 15 to 30 years of age, as 1,582 or more than 53 per cent. of the deaths occurred among them, 1,167 of these being among males and 415 among females.

Among infants or children under 1 year of age, there was only one death: in the age-group of 1 to 10 years, there were 157 deaths among males and 150 among females; while in the population aged 50 years and more, 64 males and 38 females died from Plague.

Plague by Sections.

The general death-rate from Plague for the whole City was 3·00 in the year under review, being higher by ·34 than that of 1913 (2·66). Among Sections with a higher incidence of the disease may be mentioned in A Ward, Middle and Lower Colaba (4·87), and Fort Northern (3·50); in B Ward, Mandvi (3·94); in C Ward, Dhobi Talao (3·56) and Kumbharwada (3·14); in D Ward, Mahalakshmi (4·06); in E Ward, Mazagon (5·12), Tarwadi (3·76) and Byculla (3·64); all the Sections of F Ward—Parel (3·51), Sewri (6·87) and Sion (4·43); both the Sections of G Ward—Mahim (4·39) and Worli (3·09).

All the other Sections registered a lower rate. The lowest rate (·87) was returned by Girgaum in D Ward, whereas the highest (6·87) was recorded by Sewri in F Ward, and the next higher (5·12) in Mazagon in E Ward and (4·87) in Lower and Middle Colaba in A Ward.

Compared with the mean-rate of the preceding quinquennium (1909-1913), the death-rate from Plague was ·51 lower in the year under report. The death-rates of the following Sections are slightly higher than the quinquennial mean:—

In A Ward, Upper Colaba, Fort Southern and Esplanade; in B Ward, Mandvi; in D Ward, Walkeshwar and Mahalakshmi; in E Ward, Mazagon and 2nd Nagpada; in F Ward, Sewri and Sion.

TABLE SHOWING THE DEATH-RATES FROM PLAGUE IN SEVERAL SECTIONS IN 1913 AND 1914 WITH THEIR QUINQUENNIAL AVERAGES (1909-1913).

Ward.	Section.	1913.	1914.	Quinquennial average (1909-1913).
A	Upper Colaba	1·28	2·56	2·04
	Middle and Lower Colaba	6·96	4·87	5·63
	Fort, Southern	0·57	2·88	2·46
	Fort, Northern	2·51	3·50	3·66
	Esplanade	0·67	1·74	1·65
B	Mandvi	4·06	3·94	3·86
	Chukla	2·97	2·47	3·57
	Umarkhadi	2·88	2·88	4·29
	Dongri	4·22	2·09	4·35
C	Market	2·81	2·28	3·38
	Dhobi Talao	2·04	3·56	4·06
	Fanaswadi	2·80	2·37	4·19
	Bhuleshwar	2·19	2·63	3·79
	Khara Talao	2·53	2·78	4·11
	Kumbharwada	3·53	3·14	3·96

Ward.	Section.	1913.	1914.	Quinquennial average (1909-1913).
D	Khetwadi...	1·03	1·31	1·96
	Girgaum ...	1·33	·87	2·47
	Chowpati...	·26	1·57	2·15
	Walkeshwar	·56	253	·87
	Mahalakshmi	3·26	4·06	2·80
E	Mazagon ...	3·42	5·12	4·90
	Tarwadi ...	3·16	3·76	3·77
	Second Nagpada ..	1·19	2·02	2·01
	Kamathipura ...	1·38	2·58	2·59
	Tardeo ..	1·98	2·26	2·36
	Byculla ...	1·79	3·64	3·93
	First Nagpada	1·09	2·02	2·12
F	Parel ...	3·16	3·51	3·79
	Sewri ...	3·19	6·87	4·37
	Sion ...	2·60	4·43	3·03
G	Mahim ...	4·00	4·39	4·68
	Worli ...	4·65	3·09	4·70
	Harbour and Docks ... / Railways and Homeless	0·02	·04	·07
	Total ...	2·66	3·00	3·51

Plague Measures.

The usual preventive and precautionary measures against Plague were continued during the year under report: Inoculation, Rat Destruction, Evacuation and Disinfection.

(i) Inoculation.

The number of inoculations performed during 1914 was 4,622 against 5,488 in 1913, 6,886 in 1912 and 9,621 in 1911. Of the total number, 757 inoculations were performed by the District Registrars.

STATEMENT SHOWING THE NUMBER OF PERSONS INOCULATED DURING THE YEAR 1914.

—	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
District No. 1	...	58	6	82	13	13	...	...	...	...	3	...	175
" " 2	1	...	...	6	59	...	...	...	...	...	...	...	66
" " 3	...	...	...	...	100	38	...	...	...	...	...	...	138
" " 4	...	...	1	27	3	...	...	...	...	...	...	...	31
" " 5	...	...	...	...	...	...	...	...	...	...	...	...	...
" " 6	...	...	21	98	1	...	...	2	...	3	...	...	125
" " 7	...	...	204	3	4	...	...	...	...	...	...	...	211
" " 8	...	...	11	...	...	...	...	...	...	...	...	...	11
" " 9	...	...	...	...	...	...	...	...	...	...	...	...	...
" " 10	...	...	...	...	...	...	...	...	...	...	...	...	...
Parel Laboratory ...	5	68	107	158	105	...	2	1	4	6	14	7	477
H. M.'s Common Prison ...	306	323	303	319	315	231	286	290	263	334	215	203	3,388
Total ...	312	449	653	693	600	282	288	293	267	343	232	210	4,622

(ii) Rat Destruction.

The number of rats collected and destroyed during the year was 644,241, against 654,516 in the previous year and 578,082 in 1912.

Infection among Rats.

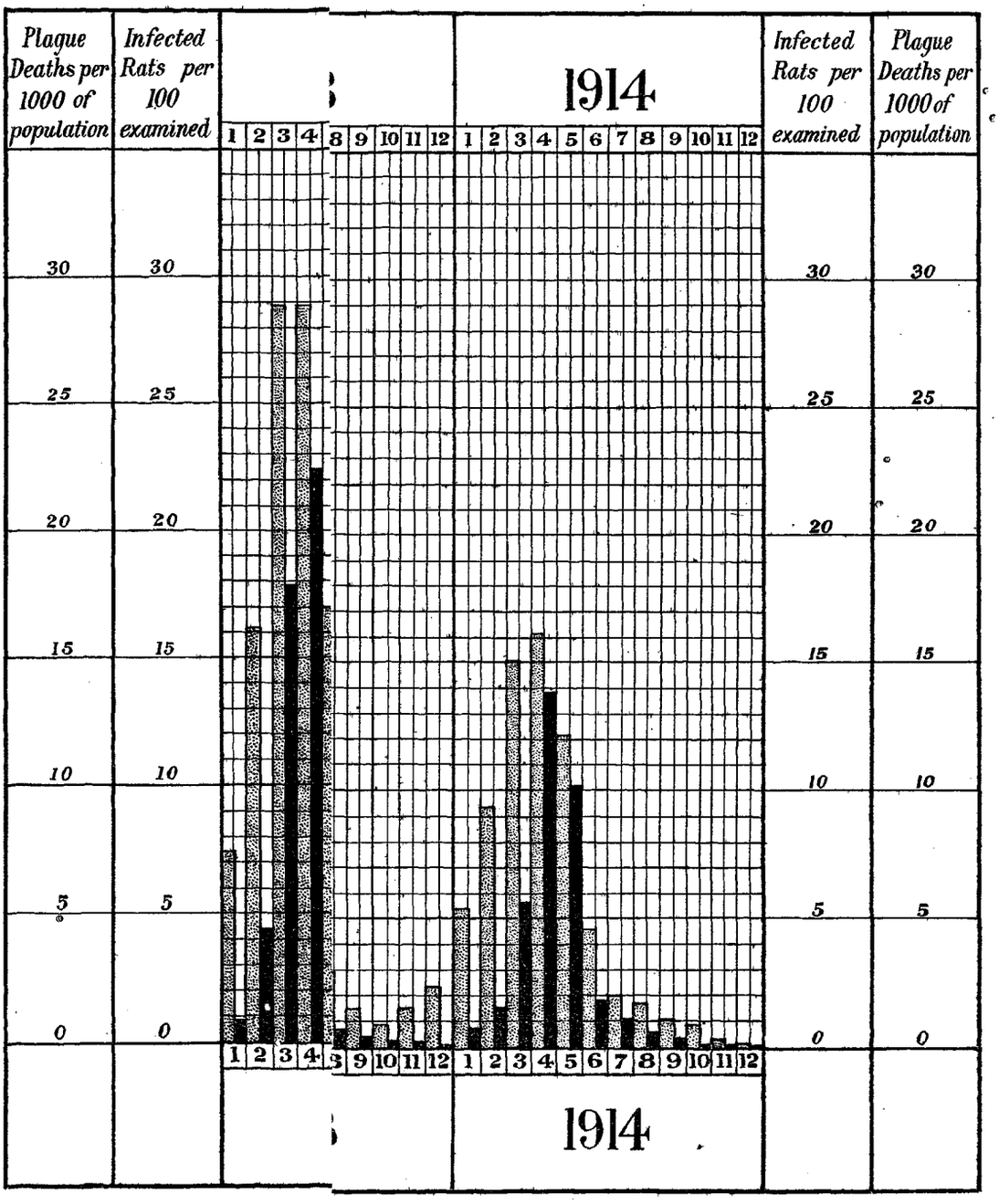
Of the 644,241 rats collected and sent to the Parel Laboratory, 210,080 were examined and 12,530 of these were found infected. There was a steady decline in the percentage of infected rats during previous years but in the year under report the ratio recorded was 5·9 as compared with 5·3 in 1913 and 5·5 in 1912. The epizootic during the first quarter of 1914 began earlier than usual and rose more rapidly than in 1912 or 1913, while the human Plague did not rise in the same intimate relation as of the corresponding quarters of 1912 and 1913.

Rat Plague and Human Plague.

Thus in 1914, the ratio of infection among rats was higher in January by 3·31, in February by 3·76, culminating in an increase of 4·3 in March—the increase for the three months being 3·58. But the increase of deaths from Plague was not in proportion to the increase of infection among rats, for the increase was only 18 in January, 10 in March and 25 for the whole quarter, a *decrease* of 3 having been registered in February. This was contrary to the experience of previous years, when the incidence of the human epidemic followed much more closely on the epizootic; but the exceptional tendency noticed in the first quarter corrected itself during April, which witnessed the more rapid and serious rise, expected and usual, in the human mortality; during subsequent months, the relation of human Plague and the epizootic followed closely the lines of previous years, as will be seen from the Diagram facing this page.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

AGUE



Plague Infection *que Deaths in the City*

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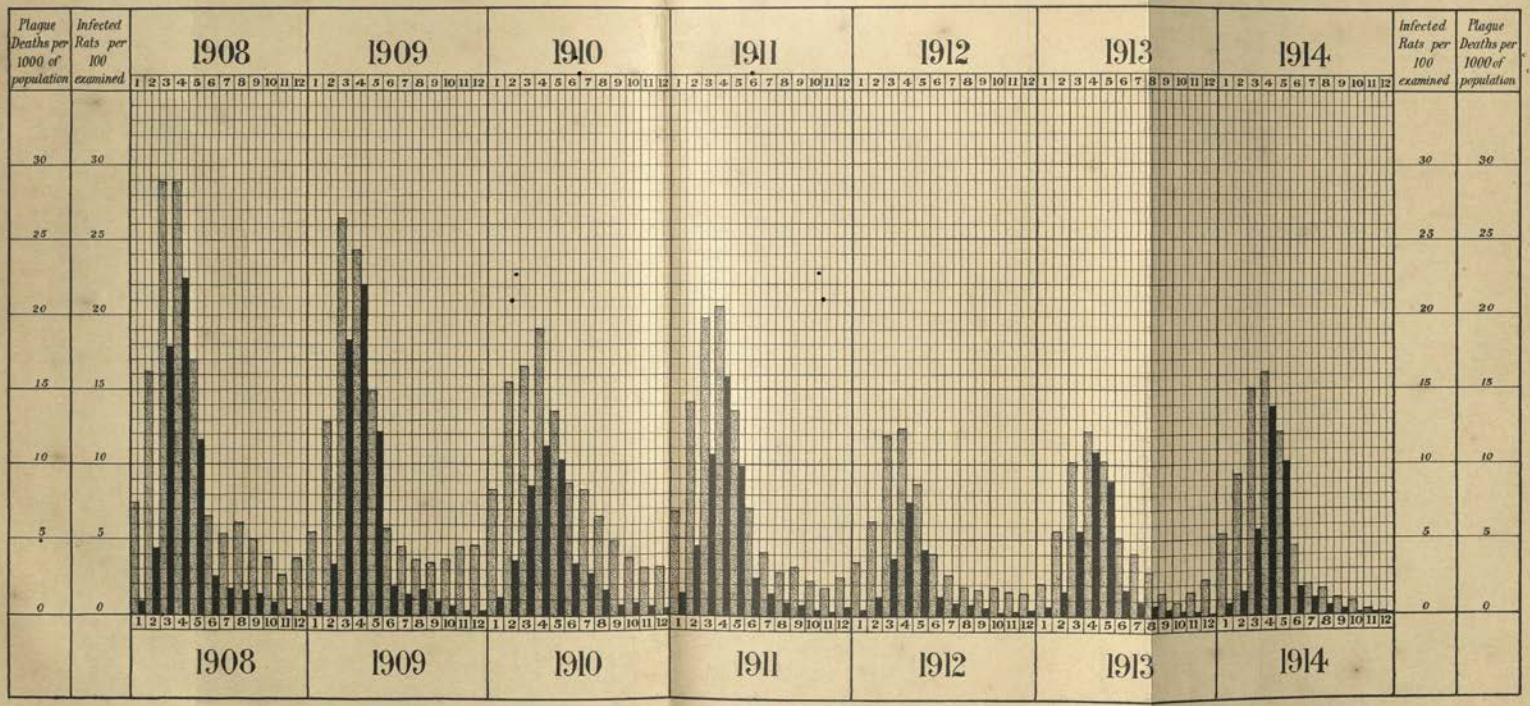
DIAGRAM

RELATION OF RAT PLAGUE TO HUMAN PLAGUE DURING 1908 TO 1914 BY MONTHS.



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Another notable feature was the uninterrupted decline of the epizootic in succeeding months, after the height was reached in April (16·11), without the recrudescence in November and December, which characterised the months in previous years.

Thus while the lowest ratio of ·94 was recorded in October 1913 and the ratio rose to 1·51 and 2·29 in November and December, in 1914 after a progressive decline the minimum of ·14 was registered in December.

The Plague mortality showed corresponding rise and decline, from 59 deaths in January to 1,135 in April against 41 and 880 respectively in 1913. From May (which registered 821 deaths) the decline was steady to the close of the year—December registering 5 deaths from the disease against 8 in 1913.

STATEMENT SHOWING THE TOTAL NUMBER OF RATS SENT TO THE PAREL LABORATORY, THE NUMBER EXAMINED AND THE NUMBER FOUND INFECTED IN 1914.

Months.	Total number of rats sent to the Parel Laboratory.	Number of rats examined.	Number of rats found infected.	Ratio.
January	57,920	20,340	1,083	5·32
February	52,827	17,302	1,613	9·32
March	55,792	16,807	2,538	15·1
April	57,807	22,607	3,643	16·11
May	46,395	17,708	2,146	12·11
June	36,193	12,417	562	4·52
July	48,826	15,181	304	2·
August	50,078	13,632	237	1·73
September	54,384	15,880	176	1·1
October	59,871	15,936	140	0·87
November	56,484	19,123	54	0·28
December	67,664	23,147	34	0·14
Total ...	644,241	210,080	12,530	5·96

To induce evacuation of congested areas, Municipal Health Camps were, as in previous years, put up at Victoria Bunder, Agripada, Purbhadevi Road, Parel Government House, Babula Tank, Gilder Tank and Mahim Gardens and Railway Station. (III) Evacuation

Semi-permanent Health Camps at Koliwada (Colaba), North Brook Gardens, Arthur Road, Chinchpokli (at the junction of DeLisle Road and Arthur Road) and Mahim Station were, in addition, maintained in a state of repair during monsoon months.

Besides these, there were private Health Camps put up by the public at Vincent Road, Matunga and Mahim.

As in the past, every place, where an infected rat was found or a Plague case occurred, was pesterined and all gullies and passages between houses were similarly treated. (IV) Disinfection.

The following Statement gives details of disinfection done:—

On account of	Cases removed to Hospital.	Houses vacated.	Houses disinfected.
Precautionary Measures	.....	259	1,999
Dead Rats	.....	114	467
Plague	367	228	3,148
Suspicious Plague	12	.....	21
Small-pox	214	4	439
Measles	36	.....	317
Chicken-pox	13	.....	31
Typhoid Fever	39	.....	251
Malarial ,, ...	10	.....	54
Remittent ,, ...	18	.....	4
Relapsing ,, ...	1	.....	.....
Cholera	100	8	320
Erysipelas	2	.....	4
Leprosy	.....	.....	5
Diarrhœa	29	.....	10
Tubercle of Lungs, including Phthisis	124	.....	1,300
Other Tubercular Diseases	4	.....	132
Pneumonia	18	.....	6
Other Causes	58	4	334
Total ...	1,045	617	8,842

Small-pox.

Small-pox was prevalent throughout the year, but it did not assume epidemic proportions. It caused in the year 252 deaths against 212 in 1913 and 623 the average of the preceding five years. 508 Small-pox attacks were registered during the year against 448 in 1913.

The following Table shows the number of Small-pox attacks and deaths during each month of the year. It will be observed that the disease was on the increase during the first four months of the year and steadily declined during subsequent months exhibiting a slight upward trend in December.

Months.	Small-pox attacks in 1914.			Small-pox deaths in 1914.		
	Males.	Females.	Total.	Males.	Females.	Total.
January ...	26	10	36	12	4	16
February	34	22	56	17	9	26
March ...	65	39	104	25	24	49
April ...	59	43	102	26	29	55
May ...	34	29	63	18	18	36
June ...	14	14	28	11	6	17
July ...	11	5	16	7	4	11
August ...	9	7	16	5	4	9
September	6	2	8	6	3	9
October ...	1	.....	1	.....	.....	.....
November	23	4	27	8	2	10
December	45	6	51	12	2	14
Total ...	327	181	508	147	105	252

The year opened with 4 indigenous cases on the 1st January and the month registered 36 cases, including 5 imported (3 from Mecca, 1 from the Harbour and 1 from Bandra), and 16 deaths against 12 attacks and 3 deaths in the corresponding month of 1913.

February registered 56 attacks (including 7 imported—1 from Deolali, 3 from Goa, 2 from Bandra and 1 from the Harbour) and 26 deaths against 47 attacks and 16 deaths in February 1913. March recorded 104 attacks (including 3 imported cases—one each from Sholapur, Santa Cruz and Borivli); and 49 deaths against 92 attacks and 42 deaths in the same month of 1913.

In April no cases were imported and the month closed with 102 attacks and 55 deaths against 124 attacks and 64 deaths in 1913.

The highest number of attacks (104) was registered in the year under report in March and of deaths (55) in April, while in 1913 the maxima were recorded in April—124 attacks and 64 deaths.

From May a gradual decline set in and the month registered 63 attacks and 36 deaths (against 77 attacks and 38 deaths in the same period of the previous year); of these, 2 cases were imported from Thana District.

June witnessed 28 attacks (including 1 imported from Rampur) and 17 deaths; against 31 attacks and 9 deaths in 1913.

July and August each registered 16 attacks and 11 and 9 deaths respectively; there being in 1913, 24 attacks and 17 deaths in July and 16 attacks and 11 deaths in August. Only one case was imported from Pandharpur in July.

In September 8 attacks and 9 deaths were recorded against 6 attacks and 4 deaths in 1913. There was no death in October from the disease but only a single fresh case against 6 attacks and 1 death in the corresponding month of 1913.

In November and December, however, with the continued arrival of pilgrims from the Haj who imported 15 cases in the former and 34 in the latter month, the disease was reinforced, registering 27 attacks and 10 deaths in November and 51 attacks and 14 deaths in December. Of the cases in November, 16 were imported—15 from the Haj and 1 from Pimpalgaon, and of those in December, 34 from the Haj and one from Bandra. 14 of the cases among Hajis and the one from Pimpalgaon proved fatal.

Thus, out of 508 cases during the year, 70 were imported—2 from the Harbour and Shipping, 52 by Mahomedan pilgrims from the Haj, 8 from Thana District, 3 from Goa and one each from Deolali, Sholapur, Rampur, Pandharpur and Pimpalgaon. Of the 252 deaths, 11 were among persons newly arrived in the City—including 7 among the Hajis.

Vaccination of Pilgrims to the Haj.

A special Vaccination staff, including a Lady Vaccinator, was engaged, as usual, by this Department for the vaccination of Mahomedan pilgrims, who embarked at Bombay for the Haj during the Haj Season—from May to November. The total number who so embarked during 1914 was 11,700 against 15,319 in 1913; and of these, 9,102 were vaccinated in Bombay, prior to their embarkation—27 males and 25 females primarily and 7,373 males and 1,677 females re-vaccinated. The operations were carried out under the supervision of the

Superintendent of Vaccination. The percentage of pilgrims vaccinated at Bombay, prior to embarkation, was 77·79 against 73·1 in 1913 and the highest since the introduction of the measure :—

Year.	No. of Pilgrims to the Haj embarked.	Number of Pilgrims Vaccinated.	Percentage of Vaccination.
1910	18,023	8,278	45·8
1911	22,856	15,140	66·2
1912	15,464	10,587	68·4
1913	15,319	11,198	73·1
1914	**11,700**	**9,102**	**77·79**

Vaccination of Pilgrims.

"About 1,000 pilgrims are reported to have left for the Hedjaz *via* Suez in order to escape vaccination and quarantine. Out of the total number of 13,834 pilgrims who returned from Jeddah on the conclusion of the Haj, 102 cases of Small-pox were recorded. It is stated that the majority of these occurred among the pilgrims who proceeded *via* Suez and were accordingly unvaccinated. The few cases which occurred among vaccinated pilgrims were of a mild type. The results of these vaccination operations are satisfactory, and credit for them is due to the pilgrim department and the pilgrim brokers who assisted in the work. Acknowledgment must also be made of the co-operation of the municipal health staff." —*Government Resolution No.* 2624, *dated* 26*th March* 1915 (*General Department*).

Small-pox by Sections.

The highest number of deaths from Small-pox during the year under review was registered in Worli (41), giving the death-rate of ·45 per 1,000 of the population in that Section. Next, in the order of incidence, follow Byculla (21) ·27 ; Dhobi Talao (19) ·49 ; Girgaum (18) ·58 and Parel (12) ·26. Only Upper Colaba and Fort South registered no death from the disease.

Small-pox by Sex and Age.

Of the total number of deaths from Small-pox, 147 were males and 105 females.

60 deaths occurred amongst infants under 1 year, being 23·7 per cent. of the total Small-pox mortality against 55 deaths or nearly 25 per cent. in 1913. Of these, 23 were males and 37 females. In the age-groups of 1 to 5 years and 5 to 15 years, 33 (17 males and 16 females) and 34 (17 males and 17 females) deaths were recorded, being respectively 13·0 and 13·4 per cent. of the total. 38·0 per cent. or 96 deaths occurred among population between 15 to 30 years—66 males and 30 females.

Vaccinal condition of infants who died of Small-pox.

Of the 60 infants who died of Small-pox during the year, 6 were said to have been vaccinated, 46 not vaccinated at all and in 8 cases the vaccinal condition could not be ascertained.

Vaccinal condition of children admitted into the Arthur Road Hospital for Small-pox.

The following Table gives the information required by Government in the General Department, under their Resolution No. 3231 of the 21st May 1912, as to the vaccinal condition of children (under ten years) who were admitted for and died of Small-pox during the year in the Arthur Road Hospital. In all 49 children were admitted into the Hospital during 1914 ; of these 24 were vaccinated and 25 unvaccinated. Of the vaccinated, 21 recovered and 3 died ; of the unvaccinated 16 recovered and 9 died.

Age.	Vaccinated.				Unvaccinated.			
	Admitted.	Recovered.	Died.	Case-rate.	Admitted.	Recovered.	Died.	Case-rate.
1 to 6 months	...	...	...	...	2	...	2	100·00
7 to 12 months	2	2	...	...	1	...	1	100·00
1 to 5 years	10	9	1	10·00	6	4	2	33·33
6 to 10 years	12	10	2	16·66	16	12	4	25·00
Total ...	24	21	3	12·50	25	16	9	36·00

Vaccination.

There are 15 Public Vaccination Stations in the City, of which 3 are worked on every Monday morning and 2 every morning during the rest of the week; while that at Kalbadevi Road is open every Sunday, morning and evening.

Vaccination is a routine duty of the Department throughout the year ; vigorous efforts are, however, made to push it on especially during the cold season. Leaflets of precautions against Small-pox are distributed broad-cast in the City and the District Registrars and Nurses and the Vaccination Staff pay visits to houses, chawls and affected localities to find out un-protected persons and to induce and vaccinate and re-vaccinate in large numbers.

Yearly Return of Vaccination (excluding Bandra and Kurla) from the Superintendent of Vaccination, Bombay, for the Year 1914.

Month.	Total number of persons primarily vaccinated.	Primary Vaccine Operations. Sex. Male.	Sex. Female.	Caste. Christians. Native Christians.	Christians. Europeans.	Christians. Indo-Europeans.	Christians. Total.	Hindoos. Buddhists and Jains.	Hindoos. Brahmins.	Hindoos. Bhatias and Lohanas.	Hindoos. Hindus of other Castes.	Hindoos. Total.	Mussulmans. Mussulmans.	Mussulmans. Negro-Africans.	Mussulmans. Total.	Other castes. Parsees.	Other castes. Hindus, Out-Caste.	Other castes. Jews.	Other castes. Total.	Age. Under One Year. 3 Months.	Under One Year. 6 Months.	Under One Year. 12 Months.	Under One Year. Total.	Under Six Years. 18 Months.	Under Six Years. 4 Years.	Under Six Years. 6 Years.	Under Six Years. Total.	Upwards. 9 Years.	Upwards. 18 Years.	Upwards. 24 Years.	Upwards. 44 Years.	Upwards. Total.	Results. Under One Year. Successful.	Under One Year. Failed.	Under One Year. Unknown.	Under Six Years. Successful.	Under Six Years. Failed.	Under Six Years. Unknown.	Upwards. Successful.	Upwards. Failed.	Upwards. Unknown.	Total Results. Successful.	Total Results. Failed.	Total Results. Unknown.	Total.	Number of Operations in excess of Persons.	Re-vaccinations. Total number of Persons Re-vaccinated.	Re-vaccinations. Sex. Male.	Re-vaccinations. Sex. Female.	Re-vaccinations. Results. Successful.	Re-vaccinations. Results. Failed.	Re-vaccinations. Results. Unknown.	Re-vaccinations. Total.	Number of Operations in excess of Persons.	Primary Results seen after the sending in of the last Monthly Return. Under One Year.	Under 6 Years.	Upwards.	Failed.	Total.
1914.																																																											
January ..	2,377	1,175	1,202	181	26	..	207	80	90	66	1,022	1,258	883	..	883	158	355	16	371	222	771	825	1,818	281	212	28	521	19	16	2	1	38	1,673	25	120	461	12	48	13	3	22	2,147	40	190	2,377	..	..	621	158	152	178	449	779	..	..	..	..	..	..
February ..	2,332	1,131	1,201	138	17	..	155	87	142	31	1,061	1,321	333	..	333	144	340	39	379	279	749	818	1,846	214	185	44	443	18	17	8	..	43	1,676	36	134	374	20	49	20	2	21	2,070	58	204	2,332	..	..	912	136	178	177	693	1,048	..	..	..	..	..	..
March ..	2,391	1,160	1,231	318	17	..	335	11	149	32	1,066	1,258	297	..	297	110	377	14	391	286	846	748	1,880	205	208	34	447	24	22	15	3	64	1,617	55	208	363	14	70	43	2	19	2,023	71	297	2,391	..	..	698	121	141	201	477	819	..	..	..	..	..	..
April	1,754	843	911	118	18	..	136	21	95	16	930	1,062	204	..	204	64	278	10	288	207	664	586	1,457	140	114	23	277	6	4	6	1	20	1,307	21	129	236	4	37	13	..	7	1,556	25	173	1,754	..	..	720	181	118	213	570	901	..	..	..	..	..	..
May	1,288	601	687	80	7	..	87	18	35	12	742	807	112	..	112	8	270	4	274	127	517	454	1,098	84	77	19	180	2	4	3	1	10	957	45	96	143	11	26	3	2	5	1,103	58	127	1,288	..	..	495	81	85	117	374	576	..	..	..	..	..	..
June	1,481	670	811	67	14	..	81	25	84	16	838	963	179	..	179	27	212	19	231	146	551	523	1,220	106	97	31	234	13	8	4	2	27	1,134	16	70	203	7	24	13	1	13	1,350	24	107	1,481	..	..	2,087	503	8	51	2,531	2,590	..	..	..	..	..	..
July	1,464	684	780	45	6	..	51	32	81	26	821	960	150	..	150	69	223	11	234	126	539	589	1,254	94	94	12	200	7	2	..	1	10	1,156	38	61	169	8	23	6	..	4	1,331	46	88	1,465	1	..	2,457	691	7	3	3,138	3,148	..	..	..	..	..	..
August ..	1,292	594	698	69	8	..	77	27	59	13	583	682	139	..	139	61	318	15	333	132	431	508	1,071	79	93	25	197	19	4	1	..	24	901	94	76	149	16	32	21	..	3	1,071	110	111	1,292	..	..	1,334	238	5	14	1,553	1,572	..	..	..	..	..	..
September ..	1,203	554	649	51	12	..	63	17	47	7	586	657	201	..	201	41	233	8	241	112	371	512	995	93	78	21	192	7	9	..	..	16	877	43	75	162	12	18	14	..	2	1,053	55	95	1,203	..	..	2,289	503	4	15	2,575	2,594	..	..	..	..	..	..
October ..	1,209	561	648	76	10	1	87	28	47	21	609	705	125	..	125	28	244	20	264	107	396	547	1,050	73	66	12	151	4	4	..	..	8	855	105	91	116	14	21	7	1	..	978	120	112	1,210	1	..	288	8	1	..	295	296	..	..	..	..	..	..
November ..	1,585	744	841	107	19	1	127	44	98	35	757	934	113	..	113	97	295	19	314	172	504	659	1,335	136	91	5	232	8	9	1	..	18	1,192	41	103	191	10	31	12	1	5	1,395	52	139	1,586	1	..	63	12	1	3	71	75	..	..	..	..	..	..
December ..	1,838	939	899	47	11	..	58	65	116	56	682	919	393	..	393	182	271	15	286	177	523	781	1,481	175	140	18	333	15	7	1	1	24	1,329	51	105	292	9	32	20	1	3	1,641	61	140	1,842	4	..	453	22	15	11	449	475	..	..	..	..	..	..
Total ..		9,656	10,558	1,297	165	2	1,464	455	1,043	331	9,697	11,526	2,629	..	2,629	989	3,416	190	3,606	2,093	6,862	7,550	16,505	1,680	1,455	272	3,407	145	106	41	10	302	14,674	570	1,268	2,839	137	411	185	13	104	17,718	720	1,783	20,221	7	..	12,417	2,456	715	983	13,175	14,873	..	..	..	..	..	..
Grand Total..	20,214	20,214		1,464				11,526					2,629				3,606			16,505				3,407				302					16,512			3,407			302			20,221						14,873		14,873									

N. B.—The Statement includes vaccinations performed by Private Medical Practitioners and by the Medical Officers in charge of the two Jails and of the Colaba Lunatic Asylum.

The total number of vaccine operations performed during the year was 32,450, which though lower by 3,616 than in 1913, exceeds the decennial average (1904-1913) by 2,089. **Vaccine Operations.**

There were 221 deaths registered from Cholera during the year under review against 125 in 1913 and 574 the average of the previous five years. The number of Cholera attacks was 334. The disease, though prevalent throughout the year, did not reach epidemic proportions. **Cholera.**

During the first five months of the year, the disease did not show any signs of rise notwithstanding continuous importation of cases from outside and registered in all 34 cases (including 13 imported) and 22 deaths; of these, 13 cases and 7 deaths occurred in April.

Four attacks (including 1 imported from Broach and 1 from Mumbra) and 4 deaths were registered in January: 2 cases occurred in February but no death: they were imported from Broach and Bulsar. 6 attacks (including one imported from Pandharpur) and 4 deaths were recorded in March; 13 attacks (including 2 imported from Pandharpur, 1 from Kopergaum and 1 from Satara District) and 7 deaths were registered in April and 9 attacks (including 2 imported from Junnar, 1 from Nasik and 1 from Talegaon) and 7 deaths occurred in May.

But the incidence of the disease received a sudden impetus in June, which registered the maximum number of imported cases during the year (17); these came from a wide area—3 from Nasik, 2 from Bijur, 2 from Junnar, 2 from Wadgaon, 2 from Poona District and 1 each from Satara, Manmad, Ratnagiri, Kalyan, Pandharpur and Kolhapur. In all 37 attacks and 26 deaths were chronicled in the month. In July, there were 70 cases inclusive of 12 imported and 45 deaths; and in August 157 cases inclusive of 3 imported and 105 deaths. Thus during the two months, 15 cases were imported—8 from Pandharpur, 3 from Poona and 1 each from Jejuri, Lucknow and Ghatkoper and 1 among Mahomedan Pilgrims from the Haj.

August witnessed what might have proved, but for prompt measures taken, a very serious outbreak of the disease in Dadar *Kumbharwada.*

Outbreak of Cholera in Dadar Kumbharwada, G Ward, in August 1914.

On the 15th the Registrar, No. 10 District, and his staff, received information about 2 cases of Diarrhœa at Dadar Kumbharwada, G Ward, in a ground-floor tiled chawl of 6 rooms situated at Dadar fields near Tulsi Pipe Line and tenanted by about 45 persons, mostly mill-hands and G. I. P. Railway servants. But on their visiting the places they found 6 persons suffering from Cholera—4 in one room and 2 in other separate rooms. 2 of the cases were in moribund condition and died on the premises in the presence of the Deputy Health Officer, and the remaining 4 were removed to the Arthur Road Hospital. The occupants of the chawl were advised to move into the Mahim Health Camp and all of them except 13 persons removed at once.

The next day one Cholera case was detected among the contacts in the camp and was removed to the Arthur Road Hospital. One case was lying on a bench on Dadar Road and one was found at Purbhadevi Road; these were from the same chawl and, not finding accommodation with their relatives, appeared to have remained on the public road.

Ten contacts were at Dewba's Chawl at Dadar; of these, 3 contracted the disease and were sent to the Hospital and other contacts sent to Mahim Health Camp.

On the 17th August, one case was detected in a watchmaker's shop at No. 358, Ferguson Road; the patient was advised to go to the Arthur Road Hospital but was removed elsewhere at night by his relatives. He was traced to Naigaum and removed to the Arthur Road Hospital on the 20th idem.

Both the chawls and the shop were disinfected, clothings, beddings, &c., sterilized and the gullies and latrines flushed and disinfected. The walls were treated with Permanganate of Potash. Samples of well water were sent to the Municipal Analyst who detected Cholera Vibrio in one of them.

Cases of Cholera had occurred in F Ward and one Ladoo Rama working at Matunga Railway Lines in F Ward, who had some connection with the earlier cases in that Ward, came to reside at the chawl at Dadar. There was no supply of pipe water here and the occupants used well water for drinking and domestic as well as other purposes.

In all 22 persons were attacked with Cholera. Out of these, 20 were removed to the Arthur Road Hospital, of whom 11 recovered and 9 died; the other two died at home. Further spread of the disease was checked by the prompt and efficient measures taken by the Deputy Health Officer and the District Registrar and their staff, who carried out their duties exceedingly well.

September, however, recorded an enormous reduction in the incidence of the disease: 24 cases and 17 deaths; there was no imported case. It is hardly necessary to pursue the course of the disease during subsequent months: the incidence was so low and there was only a single imported case (in November, from Madras). 12 cases, out of which 6 proved fatal, were all that were recorded during the last quarter of the year.

Thus of the 334 attacks registered during the year, 46 were imported and of the 221 deaths 25 were among new arrivals not belonging to the City.

Cholera by Race and Sex.

Of the 221 deaths from Cholera, 167 occurred among Hindus of all castes—100 males and 67 females; and 22 among Native Christians—10 males and 12 females. Mussalmans recorded the next highest mortality (20—15 males and 5 females) and next Parsees with 7 deaths—4 males and 3 females. There were 2 deaths (males) among Europeans, 2 among Jews—1 male and 1 female—and 1 (male) among Eurasians.

The sex distribution of the mortality was 132 males and 89 females.

Cholera by Sections.

The rate of mortality per 1,000 of population for the whole City was ·22 and the Sections which registered higher rates in the order of incidence are:—Sion (·78—24 deaths), Mazagon (·53—16 deaths), Chowpati (·43—5 deaths), Esplanade (·39—7 deaths), Byculla (·38—29 deaths), Sewri (·36—7 deaths), Mahim (·36—11 deaths), Parel (·30—14 deaths), Umarkhadi (·28-13 deaths), Tarwadi (·24—7 deaths), Worli (·24—11 deaths) and Market (·23—7 deaths).

Upper Colaba, Middle and Lower Colaba and 1st Nagpada registered no death.

Cholera by Sex and Age-group.

Five deaths (2 males and 3 females) from Cholera were registered among children under 5 years and were 2·2 per cent. of the total deaths from the disease; 27 (15 males and 12 females) or 12·2 per cent. were among population between the ages of 5 to 15 years. In the age-group of 15 to 40 years, 149 deaths (92 males and 57 females) or over 67·4 per cent. were registered. 36 deaths (20 males and 16 females) or 16·2 per cent. were in the age-group of 40 to 60 years and 4 deaths (3 males and 1 female) or 1·8 per cent. in the age-group of 60 years and upwards.

Fevers.

Under the general heading of "Fevers" which includes Scarlet, Enteric, Malaria, Ague and Remittent and Relapsing Fevers, 2,877 deaths were registered during the year under report, being 166 less than in 1913, 260 less than the average of the antecedent quinquennium and 424 less than the preceding decennial average (1904—1913); it was the lowest since 1904, except in 1909 (2,800).

Scarlet and Relapsing Fevers were absent during the year, there being 4 deaths from the latter type in 1913.

Enteric Fever caused 147 deaths, being 7 less than in 1913 but 7 more than the average of the preceding quinquennium. To Malaria were attributed 213 deaths, being respectively 48 and 95 less than in the preceding year and the average of the last quinquennium. It may be mentioned that the mortality from Malaria was the lowest since 1907 (149).

From Ague and Remittent Fever 2,517 deaths were registered, being 107 less than in 1913 and 144 than the average of the preceding quinquennium.

The following Statement gives the monthly variations of mortality in 1914 from all kinds of Fevers in general, and from each type separately. The maximum mortality from Fevers was reached in March, 337 against 296 in October 1913 and the lowest in November, 157 against 193 in July in the preceding year. As compared with 1913, the mortality from Fevers was lower month by month during the last eight months of the year, except in July when it was higher by 6 (199). The highest number of deaths from Malaria in the year under report was 28 in January against 41 in October 1913:—

FEVER MORTALITY BY MONTHS IN 1914 AND 1913.

MONTHS.	1914.					1913.
	Enteric.	Malarial.	Ague and Remittent.	Relapsing.	All Fevers.	All Fevers.
January	10	28	278	...	316	242
February	8	17	270	...	295	226
March	16	10	311	...	337	270
April	13	14	281	...	308	263
May	18	14	227	...	259	292
June	19	16	159	...	194	240
July	18	10	171	...	199	193
August	9	23	204	...	236	254
September...	13	22	175	...	210	264
October	7	26	167	..	200	296
November	8	19	130	...	157	268
December	8	14	144	...	166	235
Total ...	147	213	2,517	...	2,877	3,043

Measles registered 263 deaths, being 41 less than in 1913 and 6 less than the average of the previous five years. Measles.

From Influenza 3 deaths were registered against 1 in the previous year and 3 the average of the preceding quinquennium. Influenza.

To Whooping Cough 10 deaths were due, being 1 more than in the last year but 1 less than the average of 1909-1913. Whooping Cough.

Diarrhœa caused 2,201 deaths, being respectively 152 and 32 less than in 1913 and the average of the antecedent five years. Diarrhœa.

From Dysentery 901 deaths occurred, being 81 more than in the last year but 212 less than the average of the previous five years. Dysentery.

Puerperal Septicæmia caused 291 deaths, being 10 more than in 1913 but 61 less than the average of the preceding quinquennium. Puerperal Septicæmia.

Leprosy caused 6 deaths against 90 in the last year and 88 the average of the previous five years. Leprosy.

To Cancer 68 deaths were due, being 4 and 8 more than in 1913 and the average of 1909-1913. Cancer.

The number of deaths amongst children born prematurely was 187, being 6 more than in the previous year and 13 more than the average of the last five years. Premature birth.

To Debility 2,261 deaths were ascribed, being 28 less than in the preceding year and 340 less than the average of the previous quinquennium. Debility.

From Old Age, 1,772 deaths were registered against 1,661 in 1913 and 1,892 the average of the previous five years. Old Age.

To the Diseases of the Nervous System 1,935 deaths were attributed, being 30 less than in the previous year and 136 less than the average of the antecedent five years. Diseases of the Nervous System.

From the Diseases of the Circulatory System 298 deaths were registered against 354 in the preceding year and 340 the average of the previous five years. Diseases of the Circulatory System.

Tubercle of Lungs caused 1,520 deaths, being 308 less than in 1913 and 636 less than the average of the last five years. Tubercle of Lungs. (Phthisis.)

To the Diseases of the Respiratory System 8,734 deaths were due, being 130 more than in the previous year and 111 more than the average of the last quinquennium (1909-1913). Diseases of the Respiratory System.

From the Diseases of the Digestive System 1,183 deaths were registered against 1,237 in 1913 and 1,213 the average of the last five years. Diseases of the Digestive System.

The number of deaths from the Diseases of the Lymphatic System was 6, being respectively 5 and 10 less than in the last year and the average of the previous five years. Diseases of the Lymphatic System.

To the Diseases of the Urinary System 322 deaths were due against 298 in the previous year and 315 the average of the preceding five years. Diseases of the Urinary System.

From the Diseases of the Generative System 147 deaths were registered, being 14 less than in 1913 and 1 less than the average of the last five years. Diseases of the Generative System.

The Diseases of the Organs of Locomotion and Connective Tissue caused 71 deaths, being 28 and 38 less than in the preceding year and the average of the previous five years respectively. Diseases of the Organs of Locomotion and Connective Tissue.

The number of Accidents and Violence during the year was 608, being 52 less than in the preceding year and 80 less than the average of the antecedent five years. Of these, 62 deaths were due to poisoning, being 3 less than in 1913 but 8 more than the last quinquennial average. Of these, 38 were suicidal, 15 accidental, 2 from snake-bite and in 7 cases the circumstances under which the poison was administered were not known. 77 deaths were due to drowning against 86 in 1913 and 99 the average of the previous five years. Of these, 30 were suicidal, 29 accidental and in 18 cases the circumstances under which the deaths took place were not known. Accidents.

The twelve Municipal Dispensaries, including the two opened in 1912—one at Parbhadevi Road and the other "Bai Gowrabai Dispensary" at Kamathipura, were open throughout the year to administer, as in the past, free medical relief to the sick poor of the City. One more was added to these during the year at Kamathipura—" Rajana Jaloojee Dispensary " (opened on 21st July, 1914). Municipal Dispensaries.

The actual number of new cases (individuals) treated at these Dispensaries during the year was 91,536 (60,878 males and 30,658 females) against 88,393 in 1913, making 424,197 the total number of attendances against 348,204 in the previous year. Of these, 1,962 patients were seen at their houses.

The diseases treated at these Dispensaries were Fevers, Plague, Small-pox, Measles, Diarrhœal Diseases, Diseases of the Digestive, Urinary, Generative, Respiratory, Circulatory and Nervous Systems and other general and local diseases.

The actual number of new cases individually treated at the Colaba and Victoria Bunder Charitable Dispensaries (to which a contribution is paid by the Municipality and which are under the direct control of the Registrar, No. 1 District, who visits them daily) was 6,828 (4,819 males and 2,009 females) making 29,926 the total number of attendances; out of these, 58 patients were seen at their houses.

Visiting Nurses.

During the year, the Nurses and Midwives working under the District Registrars, paid 27,660 visits to houses, chawls and huts and enquired into 3,455 cases of ordinary sickness, 1,003 cases of Infectious Diseases and 1,549 deaths among the female population of the City. They also attended 1,214 confinements against 1,200 in 1913 and ascertained 9,523 births.

Notifications of Infectious Diseases.

1,746 Notifications of Infectious Diseases were received during the year against 1,765 in 1913. Of these, 1,261 were of Plague, 44 of Phthisis and other Tubercular Diseases and 441 of other Infectious Diseases.

From Hakims and Vaidyas 30 Notifications were received and, on investigation by the Medical Men of the Department, the diseases reported in 29 cases were found to be correct.

Certification of the Cause of Death.

The number of Certificates of the Cause of Death received during the year was 8,935 against 8,903 in the preceding year; of these, 4,620 were from qualified Medical Practitioners, being the same as in 1913, 203 from Hakims and Vaidyas and 3,208 from various Hospital Authorities. The causes of 626 and 278 deaths were certified by the Commissioner of Police and the Coroner of Bombay respectively. The cause of 552 deaths was certified by the Registrars after seeing the persons during their last illness and the cause of 21,860 and 504 deaths was verified by the Registrars, in the former case on the information gathered from the relatives of the deceased and in the latter after seeing the dead bodies. In 2 cases the cause of death could not be ascertained as the residence of the deceased could not be traced.

During the year, the Medical Practitioners were supplied, as during the last six months of 1913, with stamped envelopes with the printed address of the Executive Health Officer, to give further facilities for notifying cases of Infectious Diseases and certifying the cause of death to this department and the results show some improvement: the percentage of Notifications received rose from 15·07 in 1913 to 16·00 in the year under report. The percentage of certificates of Cause of Death to the total mortality was 15·14 against 15·26 in 1913.

Year.	No. of Notifications received from			Percentage of total Notifications to number of cases reported by District Registrars.	Number of Certificates of Cause of Death received from			Percentage of total Certificates received to Total Mortality.
	Medical Practitioners.	Hakims & Vaidyas.	Total.		Medical Practitioners.	Hakims & Vaidyas.	Total.	
1910	1,487	68	1,555	11·29	2,894	134	3,028	8·66
1911	1,551	53	1,604	11·63	3,994	287	4,281	12·24
1912	1,687	31	1,718	11 32	4,891	289	5,180	13·29
1913	1,765	34	1,799	15·07	4,620	236	4,856	15·26
1914	**1,746**	**30**	**1,776**	**16·00**	**4,620**	**203**	**4,823**	**15·14**

Copies of Certificates issued.

900 copies of Certificates of Registry of Death and 209 of those of Birth and 17 true copies of Birth and Death Reports were issued during the year and the total fees received on account of them and for searches of Birth and Death Registers for indefinite periods as well as for producing such Registers in Courts of Law amounted to Rs. 1,513-3-0 against Rs. 1,288-0-0 during 1913.

Notices under the Act.

The number of notices served by the Health Department during the year under the various Sections of the Municipal Act was 3,202 against 3,402 in 1913. Of these, 1,669 were complied with, 1,092 were not complied with, 142 cancelled and 299 were pending at the close of the year.

In 2,295 cases summonses were issued by the Presidency Magistrates at the instance of this Department against 2,370 in the preceding year. Convictions were obtained in 703 cases and in 594 the parties were warned and discharged; 28 cases were dismissed; 949 withdrawn, the offences having ceased. 21 cases were pending at the close of the year. Of the notices, 134 were issued against overcrowding, 1 in B Ward and 133 in E Ward. The notice issued in B Ward was pending till the end of the year; and of those issued in E Ward, 129 were complied with, 1 not complied with and 3 cancelled. In one case a summons was issued by the Presidency Magistrate but it was subsequently withdrawn, the party having complied with the requisitions of the Department.

Conservancy Work.

During the year 602,634 carts of cutchra, drain stuff and other matter were emptied at the Tardeo Flats and other places in the City against 690,632 carts in the previous year. Of these, 519,235 were Departmental and 83,399 private.

The decrease in the number of cutchra carts is only apparent and due to the employment of a much larger number of high-sided carts, which generally have a carrying capacity double that of the ordinary carts and to many of the private carts taking debris, &c., direct for reclaiming land in different parts of the City. Taking this into account, the total amount of cutchra, &c., removed during the year was not less than in previous years, if not more.

During the year 99,968 night-soil and cess-pool carts and 4,182,021 night-soil baskets were emptied at the several Night-Soil Depôts in the City, as compared with 111,435 night-soil and cess-pool carts and 4,216,949 night-soil baskets in 1913. Of these, 550 night-soil carts were private and the rest Departmental.

The figures show a decrease in the year under review of 11,467 night-soil carts and 34,928 night-soil baskets compared with 1913.

This decrease is perceptible especially in B Ward which witnessed, during the year, the demolition of a large number of houses as a result of the operations of the City Improvement Trust; and the substitution of basket privies by water closets; and in F and G Wards, in which a considerable number of mills have been connected to the sewer.

ADMINISTRATION OF PUBLIC HEALTH.

Divisions of the City :— (1) Wards.

For administration purposes, the City has been divided into seven Wards, each under the subordinate charge of a Deputy Health Officer, who is responsible for both the conservancy and sanitary work of his Ward. The Deputy Health Officers are assisted by a staff of Sanitary and Conservancy Inspectors, Assistant and Sub-Inspectors. The Deputy Health Officers are under the direct control of the Executive Health Officer, who is assisted by two Assistants.

(2) Registration Districts.

For the purposes of the Registration of Births and Deaths and free Medical Relief, the City has been divided into ten Districts with ten Municipal Charitable Dispensaries, each in charge of a Registrar with 2 Sub-Registrars and one trained Visiting Nurse and Midwife. In addition to these ten Dispensaries and the two more opened in 1912 (one at Purbhadevi and the other "Bai Gowrabai Dispensary" at Kamathipura), a third one "Rajanna Jalooji Dispensary" at Kamathipura was opened in 1914. The last three Dispensaries are under the control of the Registrars Nos. 10, 8 and 5 Districts respectively. Each of the District Officers is equipped with staff for registering births and deaths, enquiring into the the cause of death, checking Cemetery Returns and for disinfecting houses and rooms where cases of Infectious Diseases may have occurred or dead rats may have been reported. The work of the Registrars is supervised by the Deputy Health Officers and the Executive Health Officer with his two Assistants.

There is also a Special Assistant Health Officer in charge of the Arthur Road Hospital for Infectious Diseases and the Maratha Hospital for Plague.

There is also a Special Assistant to the Health Officer for Malaria, in charge of the Special Malaria Department.

Municipal Laboratory.

For analytical and bacteriological examination, there is a Municipal Analyst in charge of a fully equipped Chemical and Bacteriological Laboratory, where chemical analysis and bacteriological examination of Municipal Waters is conducted by him.

Veterinary Establishment.

The Veterinary Staff includes four Inspectors with a Shalotri, who are all qualified Veterinary Surgeons and inspect the Milch Cattle Stables in the City and the Municipal Bullocks and are in charge of the Municipal Bullock Hospital.

Vaccination Establishment.

The Vaccination Staff includes, besides the Superintendent and the Assistant Superintendent, ten Vaccinators, one Head Clerk and four subordinate clerks.

The Conservancy and Sanitary Staff, exclusive of the labour staff, consisted in 1914 of:—

3 Chief Inspectors.

8 Sanitary Inspectors.

9 Conservancy Inspectors.

2 Loading Siding Sub-Inspectors.

6 House Drain Inspectors.

7 Assistant Sanitary Inspectors.

67 Sub-Inspectors.

1 Halalkhor Inspector.

5 ,, Sub-Inspectors.

In the opening paragraphs of this Report a statistical survey was made of the health conditions of the City, a survey which embraced a period of a decade and a half from 1900-1914 and indicated the improvement that had been wrought.

This retrospect may now be supplemented with a brief re-capitulation of the various measures adopted from time to time during the period and the sanitary reforms advocated and carried out, as it will help to understand the process whereby the favourable position in which we find the City in 1914 was evolved.

These measures formed part of a definite and deliberate programme laid down in 1901 for the approval of the Municipal Commissioner and the Corporation ; this programme indicated the lines along which the efforts of the Health Department were to be directed in improving the sanitary condition of the City and has throughout been steadily kept in view and, as far as it lay in the power of the Department, faithfully carried out.

Control of Plague 1896-1901 (September).

In 1901, Plague and its ravages were the one engrossing question of Public Health in the City and had been for nearly a quinqennium a subject of grave concern to Government and the Corporation and all those interested in the well-being of the City.

The mortality from all Causes in 1900 was 79,350 and from Plague alone 13,285, giving the ratios of 96·55 and 16·16 respectively per 1,000 of the population. The highest daily mortality on a single day was 433 and from Plague alone 127.

The measures for the control of Plague were being carried out by a Deputy Commissioner, under the Municipal Commissioner as Chief Plague Authority, with a Staff of 12 Military Officers and 18 Sectional Medical Officers who supervised evacuation, inoculation and disinfection at a cost of Rs. 4,43,000 in addition to the cost of the Health Department of Rs. 19,97,000.

There was no attempt made to direct inquiries or investigate into the cause or prevention of Plague.

I advised "that the measures adopted must, to be effective, be guided by scientific principles which must be intimately connected with other measures for the sanitary administration and based on knowledge and experience such as only a man specially trained in the administration of Public Health can possess. The control of all Infectious Diseases, being so intimately connected with the proper sanitary administration of a large City, should be immediately under the control of the Executive Health Officer" (Report under No. 37319 of 8th June 1901).

Accordingly the direction and control of Plague measures was entirely transferred to the Executive Health Officer in October 1901, when the services of the Military and other Officers were dispensed with.

In 1898 a Plague Commission was appointed to enquire into the cause, etc., of the disease; in 1901 they issued a report of their investigations.

In 1903 I suggested to the Corporation the necessity for continued research into the cause of Plague. The Corporation accordingly addressed Government on the subject; proposals were also made to the Secretary of State for India by the Lister Institute in September 1904 on the desirability of further investigation of some of the problems concerning Plague. In January 1905, the Secretary of State placed the direction of such an enquiry and the administration of an annual grant with an Advisory Committee, who appointed a Working Committee composed of the late Major Lamb, I.M.S., and Captain, now Major,

Liston, I.M.S., and Drs. Petrie, and Rowland of the Lister Institute. Dr. Martin of the Lister Institute came to Bombay in May 1905, and under his directions, the work of the Commission was organised. Much valuable work was done and the results are published from time to time.

In 1909 I published a report on the History of Plague in Bombay 1896-1907.

The measures advocated by me in 1901 for the control of Plague were:—

(1) Voluntary evacuation of Plague or rat infected places.

(2) Voluntary removal to Hospital.

(3) Compulsory Notification of the disease.

(4) Disinfection with insecticide where infected rats are found.

(5) Destruction of rats and examination of all dead rats.

(6) Inoculation.

(7) Improvement of Insanitary areas.

(8) Investigation into the epizootic and measures to check it.

(9) A thorough system of scavengering.

(10) Free Medical Relief.

(11) Dissemination of knowledge by lectures, leaflets and diagrams.

These measures have since been carried out by the Health Department with a large saving in money and a considerable reduction in Plague mortality and have been dealt with in my Annual Reports from year to year.

The present cost is Rs. 1,40,000 per annum.

SANITARY ADMINISTRATION.

Then with a view of putting the Sanitary Administration of the City on more modern and scientific lines, a reorganisation of the Health Department was advocated and a programme drawn up which embraced,—

Programme of Work.

1. An Improved Sanitary Inspection : a better class of Inspectors, specially trained and experienced.
2. Stricter Supervision of the Cleansing Work of the City and a Better System of Refuse Removal.
3. Improvement in the System of Disposal of Excrementitious Matter.
4. A more Complete System of Registration of Births and Deaths and Notification of Infectious Diseases; and Provision of Free Medical Relief for the Poor.
5. Improved Hospital Accommodation.
6. Reduction of Infant Mortality.
7. Inspection of Food, Drugs and Milk-supply ; registration of Cow-sheds, Dairies and Milk-shops.
8. A fully equipped Laboratory for the Analysis of Food and Drugs and the Chemical and Bacteriological Examination of Water and the Bacteriological Investigation into Local Diseases; a Municipal Analyst.
9. Improvement of Insanitary Areas, Overcrowding and Ventilation.
10. Housing of the Labour Staff.
11. The Control of Tuberculosis.

Later on were added—

12. Abatement of Smoke Nuisance.
13. Anti-Malarial Measures.
14. Medical Inspection of Schools.

(Reports under Nos. 22362 of 25th March 1901,
9733 of 9th October 1901).

Re-organisation of the Health Department.

The Re-organisation of the Health Department formed the subject of innumerable Reports and much discussion and, after many obstacles were overcome, it was finally settled in its present form in 1909 and has been working smoothly. The whole of the Plague, Small-pox, Cholera and Sanitary work of the City, including Vaccination, Malarial measures, and the Conservancy and cleansing is done by the Health Department with a staff of nearly 7,000 labourers—the Executive Health Officer being assisted by two Assistants, a Special Medical Officer for Infectious Diseases and lately one for Malarial measures; a Municipal Analyst, a Superintendent of Vaccination (since the transfer of the Vaccination Department from Government in March 1909), seven Deputy Health Officers, ten District Registrars and a Staff of Inspectors, etc.

I. Improved Sanitary Inspection and Sanitary Inspectors.

To improve the knowledge of the Sanitary Inspectors in the Municipality and train up a better class of Inspectors in order to improve the Sanitary Administration of the City, the Health Department founded in 1901 a class of instruction in practical Sanitation, lectures and demonstrations being given by the Executive Health Officer and his Assistants.

In 1902 the Government of Bombay offered to take advantage of the class and has since been deputing graduates of the Engineering, Medical and Veterinary Colleges for instruction. The students were, after a six months' course of lectures and practical instruction, examined by the Executive Health Officer and the Sanitary Commissioner for the Government (Government Resolution, Educational Department, No. 1622 of 24th September, 1901).

In 1909 the Royal Sanitary Institute, London, offered to co-operate in the Examination and grant its certificates to successful candidates. Government considered the offer advantageous and accepted it with a view to encouraging the study of sanitation in the Presidency. Thus the Class was brought under the auspices of the Royal Sanitary Institute and the Sanitary Engineer to the Government of Bombay was added to the Examining Board (G. R. Educational Department No. 1566 of 3rd August, 1909). This arrangement has been in force since 1910. Students are deputed by Provincial Governments and Municipalities and come from all parts of India and Burma.

205 Students have been granted certificates hitherto.

We have now on the staff of the Health Department a considerable number of Sub-Inspectors and Inspectors who have passed the Examination and been awarded certificates.

II. Stricter Supervision of the Cleansing of the City.

The Cleansing of the City—its System of Conservancy—is so intimately connected with the health condition of the people that I agreed to the Conservancy work being retained in the hands of the Health Department. Realising, however, the enormous work entailed, I represented to the Municipal Commissioner in 1901 that a full-time Superintendent of Conservancy be appointed; this has been urged on numerous occasions since then.

After very full discussion, the Department was re-organised last in 1907 and the staff consisted of two Assistants, seven Deputy Health Officers, 27 Inspectors from Rs. 100 to Rs. 250, but before the Re-organisation, there were four Assistants (Divisional Health Officers), seven Deputy Health Officers and 32 Inspectors. There were three Chief Conservancy Inspectors before 1907, but in that year it was decided to retain the posts until vacated by the incumbents; one of these died some time after. In 1912, in again repeating my demand for a Superintendent of Conservancy, it was pointed out how the enormous staff of the Health Department with its ever increasing work and the introduction of more modern methods and the increasing demands put on them by the public and the constant desire of the Health Officer to improve the condition of the City and the Public Health generally made it absolutely necessary that a better and stronger type of supervision should be imposed. "The City has developed both commercially and in population and rapid strides have been made in opening up and developing the Island. My great point is the control of labour and stricter supervision of the work of Inspectors, Sub-Inspectors and the huge machinery of the Conservancy Department" (Health Officer's letter No. 24940 of 5th November, 1912).

After much discussion, a Superintendent was given, as an experimental measure, for a year from 1st April, 1913. Meanwhile one of the two surviving Chief Inspectors retired and this appointment also dropped out. On 31st March, 1914 the appointment of the Conservancy Superintendent ceased but, as a result of my further representations, the three appointments of Chief Inspectors were revived pending the re-organisation of the Conservancy Department, which is under the consideration of the Municipal Commissioner.

In spite of many difficulties, the inadequacy of staff and the persistent refusal of the Corporation to sanction the appointment of a Superintendent of Conservancy to ensure stricter control of labour and more robust supervision of work, the result is fairly satisfactory; but improvement would undoubtedly have been greater and more rapid if my proposals for adequate supervision had been sanctioned.

Removal of Refuse.

My Report of 1901 on the Conservancy System of the City dealt also with a more expeditious and sanitary method of removal of refuse from the City. Several Reports followed after that date. The disadvantages of the dustbin carts and the difficulties of finding suitable sites for dustbins in a constantly growing City, where every available site is being built on, were pointed out; as also how the nuisance caused in the streets by cutchra carts with their obnoxious contents could to a great extent be abolished ; and a scheme was suggested whereby Railway sidings and depôts could be made and the refuse removed by rail and taken to Deonar and the City relieved of a fearful nuisance; failing the adoption of depôts and Railway sidings, the adoption of Destructors was recommended; as " the system of dustbin carts and haulage through streets by bullock carts is one of the greatest nuisances and eye-sores in the City and primitive to a degree." (Reports No. 6462 of 1st August 1901, 14236 of 10th February 1904, No. 9707 of 15th August 1905, No. 17083 of 28th December 1906.)

The dustbin cart in use, being too cheaply constructed, constantly broke down ; the possibility of adopting therefore a stronger and more suitable cart was suggested and a reward of Rs. 200 was offered for the best model. Powell's model was awarded the prize and adopted for use in 1902 (No. 19637 of 22nd March 1902).

Wire-cages.

The practice of throwing *cutchra* from windows on to the gullies or streets being very common, and warnings and distribution of hand-bills and notices in the Press having had no effect, wire-cages were recommended to be placed at suitable parts of streets so that paper and dry unpolluted refuse could be put into them. These cages were introduced in 1907 and, being found useful, their number has since gone on increasing.

Sanitary Bins.

In 1908, sanitary dustbins of galvanized iron were recommended to be brought into use: they were placed in houses with suitable compounds with the consent of the owners or inmates ; the use of them has since become more general and helped to reduce the number of stationary carts which, from their obnoxious contents, are a cause of general complaint.

Refuse motors.

In 1901, I strongly recommended the consideration of steam or electric motor power for the removal of refuse (*vide* Annual Report).

While on leave in 1908, being on deputation, I visited some of the large Cities in England and on return submitted a detailed Report on the method of collection and disposal of town sweepings in English towns and the adoption of Motors and Destructors for the City of Bombay. (No. 18854 of 4th November 1908.)

The Corporation having sanctioned my recommendation for the employment of three motor wagons to begin with, they were ordered out from Messrs. Leyland Motors, Ltd., at a cost of Rs. 36,000. Two of these were brought into use on 30th October and the third on 9th November 1909.

The introduction of motor wagons for the removal of refuse and town sweepings marked an important innovation in the conservancy methods of the City. Reporting in 1910, on the working of the three motors and the great financial gain which had already accrued and which the provision of additional motors promised, I said " It is not always that sanitary improvements can be effected without entailing a heavy expenditure, but in this case, in addition to the saving of Rs.17,000 a year, we have been able to dispense with 40 standing dustbin carts from the streets, thus removing the refuse more frequently; to reduce by 150 trips to the Flats the long string of carts that were to be met with daily, thus reducing the dust and dung, the wear and tear of roads and carts.

"In a City like Bombay, a sufficient reserve of motors should be maintained for the service to be regular and uninterrupted; and experience has shown that there should be about 30 to 40 per cent. reserve" (Nos. 55 of 1st April 1910, 1778 of 13th April 1910 and 17481 of 19th August 1910). Seven additional motors were sanctioned in 1910. Two of these were received in 1911 and put to work in June and July; and four in May 1912; the fifth in May of the following year.

All these motors are worked by steam.

Later on four petrol motors were added to the fleet; three of them were put to work in the latter half of 1913 and the fourth on 1st January, 1914.

Three more have been sanctioned—which will bring the total strength to seventeen.

Railway Sidings.

As already stated above, Railway sidings to facilitate removal of refuse were suggested so far back as 1901, both as an expeditious and economic arrangement.

"The distance to Tardeo Flats from many parts of the City is so great that many of the carts can only make two trips, each carriyng 10 cwts.; making a ton of refuse removed in one day. If instead of removing the refuse by carts to the Flats, it is taken to a Depôt at the Railway Station at Colaba and removed thence by rail, the number of carts, bullocks and drivers in A Ward can be reduced ; if instead of going 6 miles, the refuse was only conveyed one mile, one pair of bullocks and a driver should remove six or say five tons daily, making 12 or 10 trips each day.

"Enormous saving would result in the amount for purchase and feed of bullocks, cost of carts and stable accommodation, pay of drivers, wear and tear of carts, etc."

After much correspondence and many interviews with the Railway Authorities we obtained in 1909 a small siding at Colaba and six waggons are removed daily.

As a temporary measure, a siding at Carnac Bunder was obtained from the Railway Authorities to facilitate removal of refuse from the Military Camps, etc., in October 1914.

Reclamation of the Storm-water Reservoir.

The Storm-water Reservoir is a large area of waste land on the north of Clerk Road, extending from the Hornby Vellard to the open drain.

Sixty per cent. of the town sweepings of Bombay consists of stable litter, cattle droppings and road sweepings, which for nine months of the year are inoffensive in the open air.

I suggested that the Storm-water Reservoir be filled in with this litter and a three foot covering of soil placed over it; pointing out that this would be in no way detrimental to health, because there are no dwelling houses in the neighbourhood now, nor will be as long as sewage is disposed of at Love Grove.

The advantages would be:—

(1) Utilising valuable waste to reclaim land which will, in future, be of great value as a ground for a Public Park, Golf, Cricket, Polo, etc., and abating an existing nuisance.

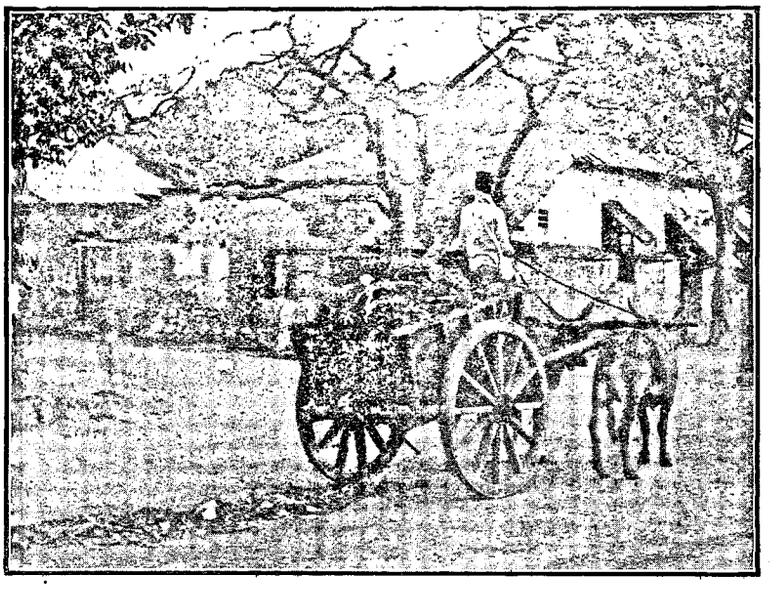
(2) Levelling the present site at Mahalakshmi and utilising the soil thus removed.

I expressed my strong opinion that a development would take place in this locality if the question was taken up without prejudice. (No. 30691 of 22nd December 1910.)

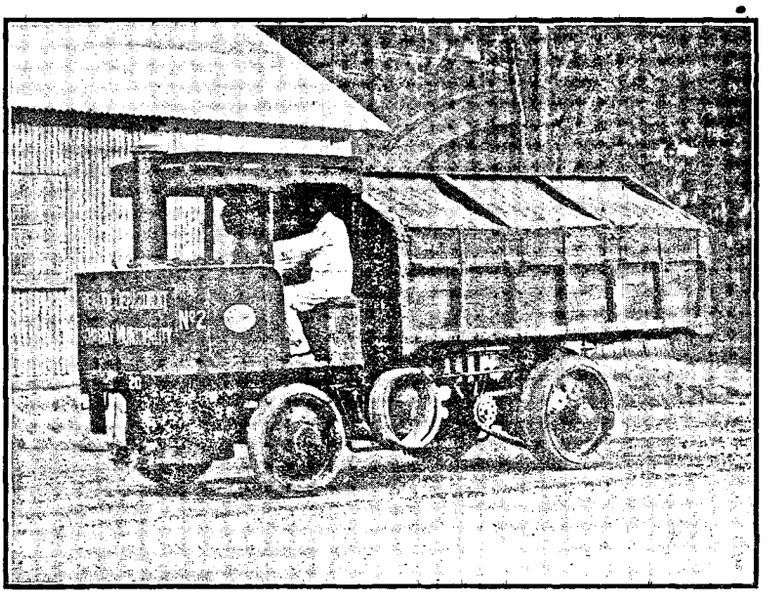
Ever since the Tardeo Flats were utilised for the deposit of town refuse, it was the practice to cart all the dung from the various large stables in the City to this place, specially during the monsoon months. In the dry months, very little dung is brought to the Flats, as most of it is utilised for the making of cow-dung cakes by private individuals. Upto the month of May (1910), all the dung which used to be carried to the Flats in the rainy season was deposited in certain pits which are located to the east of the Mahalakshmi Loading Siding. As there was no more room in these pits and a large portion of the land was to be handed over to the B. B. and C. I. Railway, it was considered advisable to have new pits before the setting in of the monsoon.

Accordingly, the Commissioner's sanction was obtained in April 1911, to the formation of these pits on the south-east corner of the Storm-water Reservoir, about 100 yards to the north of Clerk Road. It was necessary to construct an approach road and bund walls round the pits and for this purpose several hundreds of cart-loads of refuse had to be deposited in the Reservoir; and a proper foundation laid (made up of metal) which is now a sound and solid road ; while this was going on, a certain amount of nuisance did occur ; but the approach road when made was covered over with clinkers and thereafter there was no offensive refuse around the pits, nor any nuisance.

The nearest residence on the south-west side of the pits is located at a distance of over half a mile at the corner of Hornby Vellard and Tardeo Road ; the nearest premises, on the east and therefore the windward side of the pits, are those of the Turf Club, the Grand Stand being at a distance of 750 feet ; but these premises are used from December to March, when



OLD STYLE, BOMBAY.



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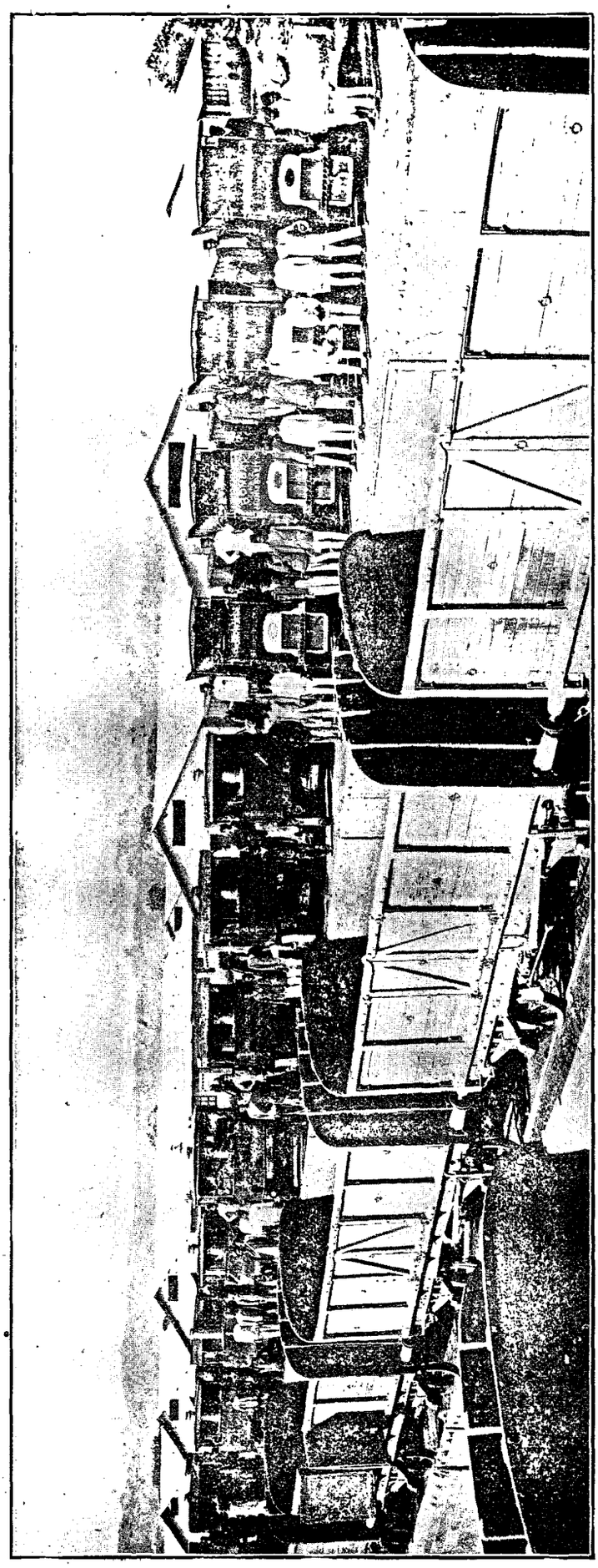
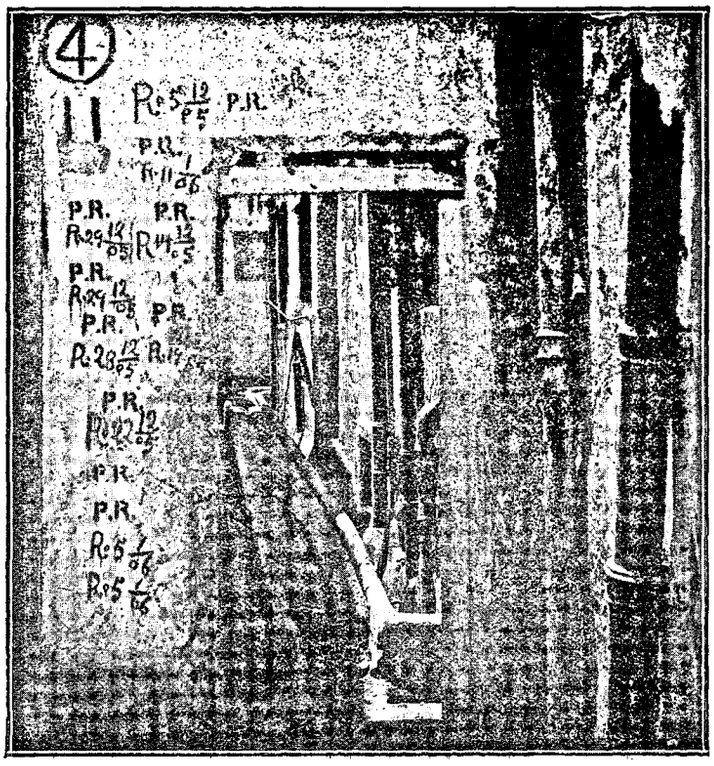
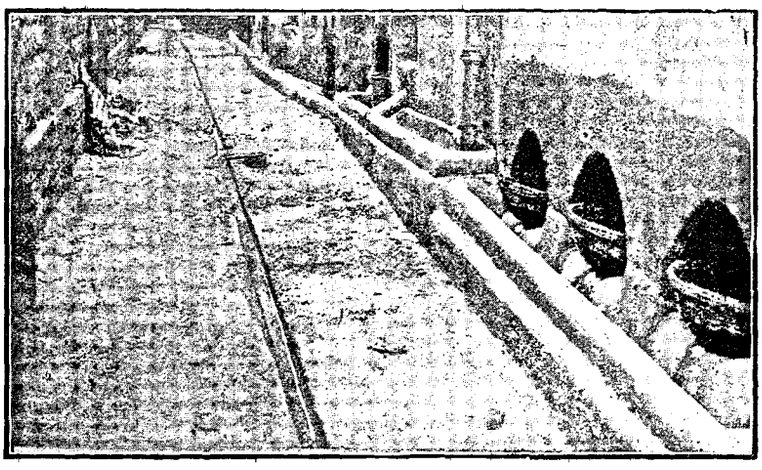


FLEET OF REFUSE MOTORS AT RAILWAY SIDING, BOMBAY.



PHOTOGRAPH OF A GULLY TAKEN AN HOUR OR TWO AFTER IT HAD BEEN SWEPT OUT.



SWEEPER'S GULLY WITH BASKET PRIVIES AND OPEN DRAINS.

hardly any dung is deposited in the pits. Besides, the pits being located in a vast area of open space, any offensive emanations from them are rapidly diluted and oxidised, and rendered practically harmless. Hence, there is no possibility of any nuisance from these pits.

In March 1912, the Commissioner suggested to the Corporation the desirability of filling up a further portion of the low-lying area between the Vellard and the Race Course. "The area between the Storm-water drain and the Vellard was handed over to the Municipality as a reservoir for storm-water. It is unnecessarily large for the purpose at any time and the provision of storm-water drains for the high lands in the centre of the Island and of pumps at Worli to empty the existing channels more rapidly will probably entirely remove the necessity of keeping any portion of the area as a storm-water reservoir. In the meanwhile the locality remains not only useless but a menace to the health of the neighbourhood. If the land could be filled up, the mosquito danger would disappear and a valuable space for recreation would be added to the resources of the City. Its proximity to the Railway on one side and to the Sea at the Vellard on the other would make it a convenient and favourite resort.

"To fill up the ground, however, with sweet earth would cost a prohibitive sum; and it has to be seen whether the work could not be done without objection by the utilisation of municipal refuse.

"The utilisation of sweepings in this way would save their very difficult removal to Deonar and the cost thereof, probably quite Rs. 40,000 per annum."

The Corporation gave their approval but appointed a Committee to watch the progress and the effect of the work and report if it should be proceeded with or stopped (April 1912).

A large area has already been reclaimed in this way and brings us a large profit from cultivation.

III. Improvement in the System of Disposal of Excrementitious Matter.

In 1901, I presented a detailed Report on the Conservancy System in the City.

As the first step towards improving the sanitary condition of the City, I urged an improvement in the system of night-soil disposal: the abolition of the basket system by substituting a privy on the water carriage system. The advantages of the latter system were stated to be the following:—

(1) The night-soil will be removed at once without hand labour.
(2) The gullies will not stink; the soil and air will not be polluted.
(3) The night-soil will not be carried through the street.
(4) The expense of providing halalkhores and depots will be saved and the annual expenditure diminished.
(5) The gullies will not be always damp.
(6) The air in gullies will then be of value to health, instead of being cause of disease.
(7) The soil will not be polluted with sullage water.
(8) All the waste water could be used for flushing.

One halalkhore will be able to flush or clean as many privies as are otherwise done by 12.

The drainage of the unsewered portions of the City was to be pushed on; and in those portions where the houses were not connected with the sewer, water-tight iron receptacles were to be provided in place of baskets; pending the carrying out of these improvements, the number of depots was to be increased. This question has since 1901 formed the subject of numerous Reports and much discussion. (Reports under No. 6462 of 1st August 1901, No. 15994 of 30th August 1902, No. 17083 of 20th December 1906, etc.).

The water carriage system of disposal has since made some progress. In all new buildings, this system is, as far as possible, insisted on. More and more houses are every year connected to the sewer; recently several of the mills in F and G Wards have been so connected. But the difficulty of sufficient pressure of water at all times in case of high buildings has considerably retarded progress; and it may be hoped that with the completion of the duplication of the Tansa Main and the improvement of water-supply to the City in the coming year, the pace will be faster.

IV. Improvement in the System of Registration of Births and Deaths and Notification of Infectious Diseases and Provision of Free Medical Relief to the Poor.

Realising that a complete registration of births and deaths is the first line of defence in the sanitary administration of any City and that the first thing to be done was to get accurate information as to the cause of death and sickness, proposals were made in 1901 for re-organising the system of registration of births and deaths: the objects were stated to be three-fold :—(1) to obtain an accurate and reliable registration of births and deaths and sickness, (2) to provide poorer classes with free medical aid—in this way relieving sickness and reducing mortality, (3) to gain a more intimate knowledge of the cause and existence of Infectious diseases and sickness in the City.

The revised Scheme was sanctioned and came into operation in May, 1902. The City was divided into ten Registration Districts with ten Charitable Dispensaries, each in charge of a Registrar who is a qualified medical man with two Sub-Registrars and one trained Visiting Nurse and Midwife.

Two more Dispensaries—one at Purbhadevi and the other Bai Gowrabai Dispensary at Kamathipura—were added in 1912 and another, Rajanna Jalooji Dispensary at Kamathipura, in July, 1914.

All these Dispensaries have done excellent work not only in medical relief but also in gaining the confidence of the people, who readily give information as to sickness and death and nuisance ; they have thus brought the Health Department in touch with the poorest classes.

Every Medical Practitioner in the City is from time to time informed of the obligation to certify cause of death and notify cases of Infectious Diseases and printed forms and stamped addressed envelopes are delivered free to every registered Practitioner in the City.

The Registration of births and deaths, the notification of Infectious Diseases and the notification of the cause of death are all now much more accurately carried out ; but we are yet a long way from perfection.

That some improvement has followed is evident from the following particulars :—

	1900.	1914.
Total Mortality	79,350	31,853
Death-rate per 1,000 living	*96·55*	*32·52*
No. of Births registered	*12,688*	*19,679*
Birth-rate per 1,000 living	15·43	20·09
The proportion per cent. of certificates of cause of death to total mortality	5	28·5
Proportion per cent. of notifications received from Medical Practitioners to the total number of cases of Infectious Diseases	No record.	16·00

Production of Medical Certificate of Cause of Death.

In 1902 the Corporation founded free Dispensaries, which are also Registration Offices, in order to facilitate correct registration of births and of the cause of death by offering free medical aid to the poor of the City, so that the Registrar and Sub-Registrar attending patients at their houses and at Dispensaries may be in a position to certify the cause of death as well as gain information as to births and sickness.

To gain the help of the medical profession and the public, we have since then issued from time to time printed circulars asking for their co-operation and informing them of their obligations under the Act ; medical men have been reminded of Section 450 (1) in particular, which requires them to forward to the Municipal Commissioner a certificate of the cause of death of any person on whom they attended in his last illness ; the Section has also often been published in the local Newspapers.

Every medical man is supplied free with a book of death certificate forms, as required under Section 450 (2). Yet in several cases medical men do not send a certificate of cause of death, although their name is given in the Death Reports by the friends or relatives of the deceased as having attended the case ; they reply that they did not attend the deceased in his *last* illness.

With the exception of insistence on the production of a medical certificate before the disposal of the corpse, the system in vogue is most elaborate ; and the improvement which has followed in the last twelve years is to a certain point satisfactory, as the proportion of certificates of cause of death to persons dying has risen from 5 to 28·5 per cent ; but there is still room for much further improvement.

It has been frequently urged that the production of a medical certificate of cause of death should be insisted on before the disposal of the corpse; that the Corporation, having provided facilities which have brought medical relief within the reach of the poorest of the poor, would be justified in insisting on the production of such a certificate in every case; as for those in better circumstances, there being a much higher proportion of qualified medical men in Bombay than in English Towns, there should be no reason why a medical man should not be called in to attend a patient at his last illness and certify the cause of death to the best of his ability.

The necessary amendment of the Act was urged by me last in 1911, when it was pointed out that, apart from the effect on the Vital Statistics of the City, there was a medico-legal aspect of the question which was of the utmost importance. The Corporation approached Government supporting my recommendation but Government were not pleased to accept it.

V. Hospital Accommodation for Infectious Diseases.

Much has been written about the accommodation for Infectious Diseases and a proposal is being considered.

In 1904 it was suggested, among other things, that a Hospital for Europeans suffering from Small-pox be provided at a suitable place other than the existing site which was in the compound of the General Hospital. That the land adjoining the Maratha Hospital, which was formerly used for Hospital purposes, be acquired and the existing buildings there be used for Plague, and other Wards be erected at a suitable distance for observation and other Infectious Diseases for Europeans, Parsees, Hindus, Mahomedans and others.

It might be possible to overcome the aversion of the people to remove to Hospital for treatment by setting apart a few Wards separately for each community and by appointing some of the leading members of the community as a Visiting Committee who might assist us in the removal of the patients as well.

The Wards and Buildings should be made attractive and comfortable and the furniture and appliances should be of the modern description and the gardens made attractive. At the Arthur Road and Maratha Hospitals there should be a Resident Physician and matrons permanently, and the nursing and other staff appointed as required. The site should be surrounded with a wall or fence seven feet high.

The question of better Hospital accommodation for Infectious Diseases is of the greatest importance and if suitable Hospitals are provided with arrangements to suit the different communities, a great deal can be done in preventing the spread of disease. In every city in other countries such provision is made out of the rates and it is a duty which is insisted on by Government and borne by rate-payers.

There are two Hospitals for Infectious diseases in the City—one known as the Arthur Road Hospital and the other the Maratha Hospital.

The Arthur Road Hospital was opened in 1892 for Infectious Diseases. When Plague broke out in 1896, Plague cases were sent there; at that time the Hospital was only a temporary structure; it has since been improved but is still very deficient in many respects. Over 30,000 patients have been treated there since 1892.

The total accommodation is for 320 patients; a full report on the necessary requirements and a proposal to increase the accommodation for better class of patients and Europeans is before the Corporation.

The Maratha Hospital was originally built for Plague; it is a semi-permanent structure. Since 1898, 20,000 cases of Plague have been treated there.

A proposal to make extensive improvements in Hospitals and bring them up to more modern requirements and provide Wards for Europeans and better class patients is now before the Corporation.

A proposal is also before the Corporation dealing with Tuberculosis, and a scheme has been drawn up which includes the provision of 200 beds for cases of Pulmonary Tuberculosis in the City.

VI. Reduction of Infant Mortality.

We have seen that the Infant Mortality was very high in 1900, *viz.*, 13,492 (Ratio 1,063·3 per 1,000 births registered).

In 1902, I submitted a Report (No. 5893 of 11th July, 1902) on the causes of the high Infant Mortality in the City and the measures and remedies for reducing it.

With the aid of the statistics collected, it was pointed out that the Infant Mortality was higher among the poorer classes, and the causes of the predominance were :—

1. Want of stamina in the mother and consequent inability to bear the strain of producing healthy offspring.
2. Hardwork that mothers are required to do during pregnancy and upto within a short period of confinement.
3. Want of proper nourishment to infants as, during the absence of the mother at work from early morning till late at night, they are fed on food which is for the most part unsuitable and indigestible.
4. Drugging of children during day and also during night to enable fatigued parents to enjoy their rest undisturbed.
5. Want of proper clothing.
6. Want of proper medical treatment in sickness.
7. Insanitary dwellings and surroundings and overcrowding.

The remedies suggested were, the provision of free medical relief and assistance of trained Nurses or medical women to poor women in confinement; to control the effect on the child of the industrial employment of women, the provision in the mill or workshop of a room of nursery where mothers might leave their infants in charge of some responsible person and have access to them at reasonable intervals during hours of work. It was pointed out that this last was a measure which had proved of much benefit in some European towns.

Free medical relief to the poor was provided by establishing ten Dispensaries in the different parts of the City with a trained Visiting Nurse and Midwife attached to each.

Since then many reports and suggestions have been made on the subject.

In 1903, the establishment of Municipal Milk Depôts was recommended for providing a certified supply of pure milk for the children of the poor.

In 1904, attention was again drawn to the subject: "There may be causes of Infant Mortality in Bombay, which no sanitarian can reach, but where the causes are preventible, the enormous loss of infant life can be prevented by judicious medical relief, nursing and instruction in the elements of hygiene."

To gain more information as to the way in which lying-in women were treated and the surroundings of Infants, the Visiting Nurses were directed to make reports after inquiries on certain lines which were laid down. The summary of these reports indicated that insanitary conditions, ignorance of Dais, the physical labour in which the mothers were engaged were important factors in the high Infant Mortality of the City; that the remedy for all this lay in the direction of educating the poorer classes and providing trained Nurses and female Inspectors to inspect the houses of the poor and adopting some system which would exercise some control over the native Dais as existing in other countries (Annual Report for 1906). Even so early as 1901, I had pointed out that the position of these Dais should be enquired into, especially with regard to still-born children and infants who die under the age of thirty days.

As the work of inquiry into the conditions of newly-born infants was continued, it became increasingly clear that under the conditions existing in a large, overcrowded City like Bombay, with the struggle for existence by mother and child, the remedy against high Infant Mortality was more skilled attendance in confinement, more sanitary surroundings and facilities for obtaining medical aid and food for mother and child to compete against poverty and ignorance (Annual Report for 1907).

In my Annual Report for 1908, certain practical remedies, based on experience, were suggested for the reduction of Infant Mortality, the reduction of mortality in women during puerperal state and the improvement of the health and physique of the child, and in a special Report presented to the Corporation in 1909, their adoption was urged "(1) the provision of Lying-in Hospitals for the poor and free medical attendance and provision of a nurse before and after child-birth; the provision of Lying-in Hospitals will, by giving the mother good food, nursing and skilled attendance, do much towards giving the infant a start in life and enable the mother to provide breast milk to support the child; (2) the education of native midwives at the Hospital and the registration and licensing of these women; the control over the native women who attend confinements is of the greatest importance; and a Hospital would do a great deal in the direction of training such women and provide out-door qualified women free, or at a small cost, who would be able to attend and advise the mother during and after confinement; (3) the introduction of a section of the Act so as to prevent a woman without a certificate and license from attending on a confinement; only women thus trained should be allowed to attend confinements and all such women licensed and registered; and (4) the provision of Municipal Milk Depôts where women could obtain pure milk at a small cost.

They are all in force in most Cities of Europe and America, where the State acknowledges its duty towards the people. A great deal is done by philanthropy and much by State-aided institutions."

These were repeated in subsequent years. A scheme was also launched for providing a free Lying-in Hospital for poor women which was to consist of a hundred beds and afford accommodation for different castes, with arrangements to teach nursing to native midwives to be supplied free to the poor. This scheme was later on decided to be amalgamated with the wider one of an Hospital, in the northern part of the City, for the sick poor, as the City's memorial to the late King Emperor Edward VII.

In 1912, the realisation of the suggestions so often repeated seemed yet far distant and I suggested to the Corporation the advisability of appointing a Committee to advise on the best means to be adopted to improve the condition of women during labour and their infants during infant life.

In 1913, the Corporation sanctioned, at my recommendation, a grant of Rs. 1,000 for providing certain comforts for the poor class of women during confinement, the amount to be expended in giving aid in the shape of a bed, blanket, milk, loaves, etc. This relief is being dispensed since July 1913. The District Nurse finds out women in need of such assistance and helps them to obtain it on the production of a certificate of poverty.

The success and popularity of this scheme of relief, the findings of the Committee which the Corporation were pleased to appoint and the inception by the Bombay Sanitary Association of the Lady Willingdon Scheme and its progress have been dealt with in another part of this Report.

VII. Inspection of Food, Drugs and Milk-supply, &c.

In reporting in 1904 on the first year's work done in the Municipal Laboratory, it was mentioned that samples of milk had been analysed in the Laboratory with a view of (1) ascertaining how far adulteration of milk was carried on, and (2) of fixing a standard; and it was pointed out that, apart from the question of adulteration, there was, from the manner of the collection and distribution of milk, great risk of contamination both at stables and during distribution, and by the time it reached the consumer it became exposed to many vicissitudes.

The two points to be considered in regard to the subject were stated to be (1) the quality of milk as a food-supply, and (2) the possibility of its conveying disease. These could be dealt with by constant inspection and supervision and regulation of cowsheds or stables and analysis of samples of milk offered for sale.

And as we had no power to proceed against persons selling adulterated milk, the amendment of the Municipal Act was suggested, so as to include milk, ghee and other articles of food and drink (as recommended in my former reports); "when the Act is amended, a more detailed method will have to be employed and two or three Food Inspectors appointed, as more time will be required in taking and separating samples of food, etc., sealing and delivering them, attending Court and giving evidence. I would, therefore, most strongly urge the Corporation be asked to request Government to notify milk, ghee and other articles of food, medicines and drugs under Act II of 1899" (Report No. 16533 of 14th March, 1904).

As part of the scheme of medical relief, it was suggested that the supply of guaranteed pure milk by the Corporation would be of great service to the children of the poor in reducing infant mortality due to the use of contaminated, impoverished or infected milk.

In 1904, the Corporation asked for a fresh report on my proposal for providing a Municipal milk supply; in the report submitted, the working of the Milk Depôt at Battersea was described, and sterilisation before distribution and delivery in sealed bottles was advised with a view to preventing contamination in the infants' houses.

In my Annual Report for 1907, attention was drawn to the whole subject referring to my previous Reports. Complaints had been received of importation of adulterated milk into the City in large quantities. It was ascertained that there were several villages on the G. I. P. Railway line which supplied milk to the City: "This milk may be watered after arrival here and is liable to contamination in its transit, as it is brought in open vessels in crowded third class compartments."

As our powers under the Municipal Act were limited, it was again suggested to the Commissioner that this question of adulteration of milk, ghee and other articles be considered and a representation be made to Government. In 1908, it was urged that the remedy lay in the Municipality controlling all the milk supplies and providing central Milk Depôts or Markets at which all milk must be brought and tested and distributed.

A fresh report was called for by the Corporation in 1909 (Resolution No. 7467 of 1st March, 1909) as to the steps taken by the Health Department to prevent the importation of adulterated milk and curds in the City and Island of Bombay.

A detailed report was submitted under No. 5129 of 4th May, 1909, giving reference to previous reports and recommendations on the subject.

The whole question was referred to a Committee for consideration and report; meanwhile the Corporation asked "if it is not possible to arrange for a prompt and authoritative analysis of suspicious milk, so as to admit of unwholesome milk being summarily dealt with on the strength of such analysis." The report was submitted (No. 38693 of 3rd March, 1910) pointing out that it had been "represented time after time we cannot seize milk unless it is diseased, unsound, unwholesome or unfit for human food and this we cannot prove without examining samples, as milk is rarely so badly adulterated or altered in quality as to be distinguishable at sight; in the meantime, the milk from which the sample has been taken has been sold and there is no penalty."

In October (Resolution No. 4275 of 10th October, 1910) the Commissioner was asked to submit "draft amendments of the Municipal Act so as to give to the Municipal servants the powers to serve summonses and to the Food Inspectors the power of arrest, and also to secure for the Municipality additional powers to deal effectively with impure milk."

During 1910, investigations were carried on in connection with infected or tuberculous milk in Bombay, and a special report embodying the results submitted—"How Tuberculosis is spread in India."

The investigations showed (1) that cattle in Bombay, and presumably other parts of India, do suffer from Tuberculosis to a slight extent; (2) that it is possible for milk to be infected by human agency, owing to the habits and customs of the attendants and the method of distributing milk; (3) that a possible source of infection is the fæces of infected cattle, due to the intimate connection between the labouring class and the cattle and the enormous use made of cowdung in houses and surroundings.

The measures recommended were that inspection of meat and milk dairies and cowsheds should be systematically carried out. All milch cattle should be tested with tuberculin and such as re-act to the test should be removed; legislation should be adopted for compensation and slaughter of infected animals.

Complete control of the milk supply by the State is necessary, ensuring the removal of dairies from the centres of large towns and cities; cleanliness in the collection of milk and the transmission of it from the dairy to the consumer. (Annual Report for 1911).

The provisions of the Bombay Prevention of Adulteration Act, 1889, were extended to milk from 1st April, 1912 (Government Notification, General Department No. 1321 of 27th February, 1912). The Deputy Health Officers have been instructed to take necessary action in regard to milk under the provisions of this Act. Certain defects in the working of the Act were pointed out and modifications suggested for their removal: that it is necessary to provide for the analysis of samples of milk being made by the Municipal Analyst, instead of the Chemical Analyser to Government as at present, and also to make some provision to enable Municipal Officers to purchase samples of milk by the hands of an agent, so that vendors may not know for what purpose they are bought. These suggestions have been forwarded to Government by the Corporation.

Amendments and additions to Bye-laws relating to Milch Cattle Stables framed by the Corporation were confirmed by Government early in 1914 (*Government Gazette* of 29th January, 1914). These aim at securing better control and supervision of premises used for keeping milch cattle for sale or hire or for sale of produce; better ventilation and cleanliness of stables and more space for animals; and confer additional powers governing the inspection of milch cattle, requiring notice to be given of any milch cattle affected with any contagious disease and prescribing precautions to be taken for protecting milch cattle and milk against infection and contamination.

A new Section (412-A) was added to the Act providing for the licensing of milk sellers and of places where milk is sold with a view to bringing them under sanitary control. Necessary regulations for the issue of licenses were framed and came into effect from 1st April 1914.

Meat Supply of Bombay.

In 1911, the Municipal Commissioner was addressed on the question of the general Public Health Administration of the City, pointing out what had been done during the past ten years and suggesting action for further improvement of Public Health. "During the past few

years, the sanitary condition and health of the City have somewhat improved. The conservancy and control of epidemic diseases run fairly smoothly. It is therefore my duty to bring to the notice of the Corporation any further influences affecting Public Health. My assistants were asked to collect information and compile reports on—

(1) The Markets and Slaughter House and Meat Supply.

(2) The Condition of the Eating Houses.

(3) The Condition of the Elementary Schools.

In the Report by Dr. Goldsmith on the Meat Supply in Bombay, amongst other things reference was made to the insanitary condition of the Slaughter House at Bandra; and the conditions under which animals are killed and the meat dressed for sale as calling for early reform. A more urgent matter is the manner in which animals are kept there and in which they are killed and inspected.

The Report described in detail these conditions, and pointed out how necessary it was for much to be done to lessen the sufferings of the animals destined for slaughter. It was in the method of inspecting the meat for diseased conditions and in the transport of the meat that alterations were most urgently needed : as to the former, the system in vogue was at fault as regards hours of slaughter, method of dressing the meat and the under-manning of the superior staff at the Slaughter House. Remedial measures were proposed in detail, including the construction of a modern slaughter house; alterations of the hours of slaughter and the provision of a competent Veterinary Staff to inspect each and every animal prior and subsequent to slaughter. The existing transport into Bombay by bullock wagons should be abolished and arrangements made with the Railway companies to run meat in by train in properly constructed dust-proof wagons.

The Report further pointed out that the arrangements in the Municipal Markets for the retail disposal of the meat were as bad as they could be: the vendors sit and lounge in the midst of the flesh exposed for sale ; the benches are badly designed and constructed and the arrangements for cleansing them totally inadequate—as no provision appears to exist for the proper collection and disposal of the waste meat and general refuse from the stalls ; nor is there a proper system of collection and disposal of market sweepings.

The Report dealt also with the unhygienic conditions under which meat is hawked in the poorer quarters of the City and made proposals for the exercise of a stricter measure of control over the trade. Reference was also made to the extensive trade in contraband beef, chiefly of a very inferior quality, often semi-putrescent, imported by various routes into Bombay ; this is the result of want of supervision, combined with difficulties in bringing offenders to justice and inadequate fines inflicted on conviction. Additional legal powers are being sought to overcome the existing difficulty of bringing offenders to the Magistrate ; with this, there should be provision for a minimum fine and a progressive scale of fines for every subsequent offence.

Some improvements have since been effected in the lighting arrangements of the Slaughter House and the place is now in charge of three qualified Veterinary Surgeons.

The purchase of a motor lorry has also been sanctioned this year for speedy transport of meat from the Slaughter House to the various markets in the City, but much still remains to be done to bring the trade up to the standard necessary for a city like Bombay.

The recommendations made for improving the sanitary condition of the Municipal Markets—notably the Crawford Market—have not yet received *full* attention. The report detailed the grossly insanitary features of the Crawford Market, the unhygienic conditions under which meat is exposed for sale and the unclean habits and surroundings of the vendors which are fraught with imminent risk to the large consuming public and pointed out the grave potential danger that lurked in the crevices and intervals of sunken or broken stone slabs over the benches on which the meat is deposited—owing to particles of animal matter finding lodgment in them and contaminating the daily supplies with which they come in contact.

Improvements were suggested which, at a comparatively small outlay, would place the retail trade beyond reproach, *e. g.*, stricter supervision, efficient and frequent cleansing of the markets, removal of the grossly insanitary and overcrowded Fowl-Houses to the south of the Meat Market; provision of metallic covered bins for refuse and marble topped benches for depositing meat, etc. Such minor improvements as lay within the power of the Superintendent of Markets have since been carried out.

But though the Markets bring an annual revenue of nearly six lakhs to the Municipal Exchequer, little has yet been done to remedy or mitigate the evils, and the conditions under which the vendors in the Market ply their trade continue to be practically as insanitary as they have been for years, notwithstanding the strides which sanitation has made in other directions in the City.

I would therefore remind the Commissioner and Corporation that these are matters which call for urgent reform and need therefore to be expedited as much as possible: the Report was submitted in February, 1911.

Shell-fish Trade of Bombay.

In the year under review, a further Report on the Food Supply of Bombay prepared by Dr. Goldsmith was submitted (No. 2336 of 18th April 1914); it deals with the contamination of Shell-fish and the possibility of the transmission of disease by the consumption of Oysters and other Shell-fish.

The following is a brief resumé :—

"My reports on the Meat Supply and the Eating Houses of Bombay have already been submitted and I have now the honour to forward a further report dealing with the "Shell-fish Trade of Bombay."

As it is well known that Enteric Fever may be spread by the consumption of Shell-fish, I have made enquiries into the possibility of contamination of the Oysters, etc., exposed for sale in the City of Bombay.

Before entering into the details of the trade, it would be of interest to give a brief resumé of our knowledge on the subject of the communication of disease through Shell-fish.

This knowledge is mainly derived from the Report of the Royal Commission appointed to enquire into the methods of disposing of sewage and trade effluents, dated December 28th 1903, and is based on the evidence given before that Commission by the best experts available, whose opinion was given after a large series of experiments and practical observation.

III. The Commission report—

"We have no doubt that Shell-fish, which have become contaminated by sewage, may convey Enteric Fever and other illness to human beings if eaten, either raw or in an imperfectly cooked condition. This view has been held for many years by competent observers."

The Commission very briefly indicate the grounds, on which their conclusion is based, as follows :—

"In the first place it is clear from the exhaustive survey of the Oyster Fisheries of England, Wales and Ireland that many layings and ponds around the Coast are so situated that sewage may reach them in a very short time after its dischage from the out-fall and it is well-known that micro-organisms of intestinal origin may be taken up by Shell-fish from the water in which they are lying and may remain alive in them for several days.

"On *prima facie* grounds, therefore, it would seem probable that at times the Typhoid Bacillus in a living condition might be conveyed by Shell-fish to the consumer and produce in him Enteric Fever. Experience confirms this view.

"There have been numerous instances in which several persons have been simultaneously seized with Enteric Fever and the only discovered competent cause common to all the cases was the eating of Shell-fish.

"In some of these instances, the source of Shell-fish has been traced and it has been found that it was so situated as to be obviously liable to sewage contamination.

"The cumulative effect of evidence of this character, taken in conjunction with our knowledge of the conditions, seems to us to justify the conclusion that Shell-fish contaminated by sewage may produce Enteric Fever and other illness in human beings.

"Moreover, it may be observed that the Medical Officers of Health and other scientific witnesses examined hold this view and that, speaking generally, the representatives of the Shell-fish industry do not now seriously contend that this view is unsound."

The nature of the illness caused by Shell-fish.—Bulstrode, in his evidence before the Royal Commission, says :—

"With regard to the nature of the illness associated with Shell-fish, that applies to all Shell-fish. In the first place, there are attacks of Gastro-enteritis which are probably toxic in nature, *i.e.*, due not to bacteria, but to the toxins produced by bacteria.

"Secondly, there is the bacterial infection proper, which also gives rise to a later developing Gastro-enteritis, to Enteric Fever, and to Cholera, and inferentially to any other water-borne disease, but as to this latter there is as yet no evidence. Then there are cases of dual infection. There is a considerable number of outbreaks, where some of the people who ate Oysters or Shell-fish have been at once seized with attacks of Gastro-enteritis. Some of them have recovered, some have died and some have been attacked about 14 days later with Enteric. That is, you apparently get at times a multiple infection which manifests itself in different ways."

Extent of disease due to the consumption of contaminated Shell-fish.—The Commission's conclusions were as follows :—

"After carefully considering the whole of the evidence on this point, we are satisfied that a considerable number of cases of Enteric Fever and other illness are caused by the consumption of Shell-fish which have been exposed to sewage contamination ; but in the present state of our knowledge, we do not think it possible to make an accurate numerical statement, at any rate as regards the whole country.

There can, however, be no doubt that the evil is sufficiently grave to demand a remedy."

Remedies suggested by the Royal Commission :—

A.—Purification of the sewage before its discharge into tidal waters.

B.—Seizure and destruction of unwholesome Shell-fish exposed for sale.

C.—The setting up of a competent authority to deal with all tidal waters, with power to control fore-shores, to close dangerous beds, pits, ponds and layings, and, in certain circumstances, to require treatment of sewage.

A.—It has been suggested that the evils would be removed if the law were altered so as to require that all sewage should be purified before its discharge into tidal waters. The Commission consider that any such sweeping alteration of the law could not be justified.

There are undoubtedly many cases, where Shell-fish are not concerned, in which the discharge of crude sewage into such waters does not, according to present knowledge, cause any harm, and to require purification in all cases would lead to waste of large sums of money.

Apart from this, as pointed out in an interim report of the Commission, the effluents from sewage farms, as well as from artificial purification processes, usually contain large numbers of micro-organisms, many of which appear to be of intestinal derivation, and such effluents must be regarded as potentially dangerous, inasmuch as they may still contain disease organisms.

The treatment of sewage, according to methods at present in use, cannot be relied upon so to alter its character as to allow of its discharge in the immediate neighbourhood of Shell-fish layings, without incurring appreciable risks of disease being communicated by the consumption of Shell-fish taken from such layings.

In such cases, either the sewage out-fall must be removed or the layings closed.

In other cases, where the layings are at a considerable distance from the out-fall and the sewage would be largely diluted before it reached them, treatment of the sewage might be of value in diminishing risk.

Careful and skilled examination of the local conditions would, however, be necessary to distinguish such cases.

B.—*Seizure of Unwholesome Shell-fish.*—There is nothing in their appearance to distinguish Shell-fish which have been exposed to sewage contamination from those which have not been so exposed.

In the present state of our knowledge, it is not practicable to make the distinction by the aid of a bacteriological examination as a routine measure.

In our opinion, no general enactment as to the treatment of sewage or as to the seizure of unwholesome food would meet the necessities of the case. The remedy must be sought in connection with the waters, fore-shores, pits, ponds and layings themselves.

C.—*Control of Waters and Pits, Ponds, Layings and Beds.*—This is the remedy recommended by the Commission :—

"We are strongly of opinion that the only way in which this evil can be effectively dealt with is by placing tidal waters under the jurisdiction of some competent authority and conferring on the authority power to prevent the taking of Shell-fish for human consumption from any position in which they are liable to risk of dangerous contamination, and to enforce restrictions as regards pollution, and as regards waters, fore-shores, pits, ponds, beds and layings in which Shell-fish are fattened or stored, as and when required."

It should be the duty of this authority to make a careful survey of all tidal waters within their jurisdiction and make maps showing all sewers, drains, or other sources of pollution and all fore-shores, beds, layings, ponds, etc., where Shell-fish are bred, grown, fattened or stored.

Information should be collected as to the nature and quantity of the polluting liquids discharged, as to the volume of tidal waters with which these would be mixed at various states of the tide, as to the set of currents, and generally as to all topographical conditions affecting the question of pollution.

Power should be given to register for a definite or for an indefinite period, and subject to revocation or suspension, all beds, layings, etc., from which Shell-fish may properly be taken for human consumption.

It should be provided that all sale of Shell-fish for human consumption from places not so registered, or from prohibited areas of fore-shores or waters, should be illegal: and further, that all Shell-fish about to be placed on the market shall not, within a period of 6 weeks immediately preceding offer for sale for human consumption, have been gathered from an unregistered bed, laying, pond, etc., or from a prohibited area.

Provision must also be made for the temporary closing of defined areas of fore-shores or waters, layings, etc., in the event of special dangers arising, *e.g.*, outbreaks of Infectious Disease, failure or alterations of sewage works, which may increase the liability of dangerous contamination of Shell-fish.

The authority should have power to suspend temporarily registration of any layings, etc., or to prohibit the taking of Shell-fish for human consumption from particular areas of fore-shore or water.

In regard to the question of what fore-shores, waters, beds, etc., should be closed, the Commission report:—

"It is necessary to point out at once that the results of the bacteriological examination of chance samples from layings or ponds, obviously exposed to gross contamination, has not invariably indicated that their position was objectionable in the sense of dangerous. In more than one instance Bacillus coli, which had been taken as the index of pollution, was not detected in the interior of oysters which had been exposed in high degree to sewage contamination.

"In our opinion, we should not be justified in recommending that the closing of a fore-shore, laying or pond should depend, as a matter of routine, on the results of bacteriological examination.

"In the great majority of the cases, in which outbreaks of disease have been clearly traced to Shell-fish, the fore-shore, layings, ponds, etc., from which the Shell-fish have been procured, have been so situated that the opportunities of pollution by sewage have been obvious and indisputable. That is to say, the places in question were such as would have been condemned on a careful examination by a trained person without the aid of bacteriological examination of the water or the Shell-fish.

"At the same time, we wish to point out that it is not at present possible to define with certainty the limits to which dangers, due to the discharge of sewage into a tidal river or estuary, may extend; numerous analyses, which we have made of samples of the purest waters in which native oysters are fattened, have shown that B. coli or coli-like microbes may not uncommonly be detected in 10 c.c. and sometimes in 1 c.c. of such waters.

"The same is true of the oysters themselves. Judged by this test, such waters might be considered not wholly free from objection for the purpose of Shell-fish layings.

"There is, however, no evidence to show that Shell-fish obtained from layings, such as these, have caused outbreaks of disease; and, in considering the administrative aspects of this question, this is a fact to which we attach great weight. One should not close an Oyster laying, unless there be adequate evidence that the laying is really a source of danger to health.

"In our opinion the first step is to deal with those fore-shores, pits, ponds, etc., of which the pollution is obvious and indisputable.

"Action in regard to the more doubtful cases should be deferred until more exact knowledge has been obtained."

The matter is well put in Sir Shirley Murphy's evidence:—

"I should examine particularly the physical circumstances with regard to Shell-fish layings, their proximity to sewer outfalls, the directions of currents and so on, and I should also wish to have regard to such evidence of pollution as the bacteriologist, and perhaps the

chemist, may afford ; but very much in the main I should be guided by the physical circumstances, and certainly where there is evidence of pollution, such as may be found in Dr. Bulstrode's report, I should be perfectly satisfied that the sale of Shell-fish from such layings ought to be prohibited."

Relaying of Shell-fish for the purpose of purification.—The subject of relaying of Shell-fish is one of great practical importance ; for if it be true, as has been stated, that Shell-fish from doubtful sources, when relaid for a short period in approved waters, rid themselves of micro-organisms which might give rise to disease, the problem of dealing with contaminated Shell-fish would be, in many cases, much simplified.

Commenting on experiments made by Herdman, Boyce and Klein, the Royal Commission remark :—

" So far as can be judged from these experiments, it would seem that polluted Oysters, placed in approved waters, might free themselves from dangerous organisms in the course of a comparatively short period : but Dr. Klein finds reason to think that, as regards cockles and mussels, relaying might be in this sense less effective ; he suggests indeed that B. coli might multiply in these Shell-fish and possibly therefore B. typhosus also.

" With regard to cockles and mussels, it is possible that these molluscs can be so thoroughly boiled as to bring about the destruction of pathogenic organisms without at the same time rendering the mollusc itself uneatable ; and if this proves practicable in general application, these molluscs would take their places amongst the fish which are thoroughly boiled before consumption.

" We doubt whether the experiments above referred to have been on a sufficiently extensive scale to justify the making of any precise statement as to the effect of relaying. The failure, with the methods at present available to the bacteriologist, to identify B. typhosus in an Oyster in which B. coli or coli-like microbes are present, is no proof that the Oyster does not contain this micro-organism ; and we considered, therefore, that it was not practicable to make a direct experiment with the Typhoid Bacillus ; the problem must be attacked in an indirect way.

" It seemed to us probable that, although a certain number of B. coli and coli-like microbes are, so far as our investigations show, normally present in Oysters even from good layings, if Oysters containing an excessive number of these micro-organisms were used for the experiment, and relaying considerably reduced the number, we might infer that relaying was of real value for the purpose of removing the Typhoid Fever or other disease-bearing micro-organism.

" In the limited time at our disposal, we have only been able to carry out one experiment on the point.

" We fully realise that such an indirect experiment is by no means conclusive, and it is, we think, probable that the Typhoid Fever micro-organism would die out sooner than the B. coli and coli-like microbes. We should hope that, with the advance of the science of Bacteriology, it may be possible to devise some method by which the presence or absence of B. typhosus and other micro-organisms, capable of giving rise to disease, may be established with facility and certainty."

Consumption of Shell-fish in Bombay City.—Shell-fish, in which term are included, oysters, lobsters, crabs, cockles, mussels, prawns and shrimps are largely consumed in the City, and by many castes.

Practically the only people who do not indulge in this form of diet are those to whom flesh food is entirely forbidden, either by religion or by ancient custom.

Among these latter are (a) Jains, including Marvadis, Bhattias, Visa and Dasa Osvals, (b) Banias and (c) certain Brahmins.

Practically all the remaining castes of Hindus indulge freely in one form of Shell-fish or another. These include Shenvi Brahmins, Kshatrias, Panch Kalsis, Prabhus, Sonars, Marathas and Sudras and the various sub-divisions of these castes.

Parsis, certain Mahomedans and Christians (including Europeans, East Indians and Goans) consume considerable quantities.

With regard to Mahomedans, while, as a general rule, it may be said that they (especially Shias) do not partake of Shell-fish in any quantity, it should be mentioned that the Kokni Mahomedans have a special predilection for Shell-fish, and shrimps and prawns form an almost daily article of diet when available. This is also the case with the Ghati Marathas.

Oysters are imported into Bombay from many places including Wangaon, Ucheli, Danda, Bassein, Virar, Versova, Malad, Ratnagiri, Uran, Nagotna, Thana, Goregaon and Andheri.

They are brought by rail and by sea ; when by rail, they are sometimes in baskets but more usually they are sewn up in gunny bags as being less liable to damage the shell: and by sea, they come by country-craft in bulk, loose in the bottom of the boat. Speaking generally, they are imported intact, *i.e.*, shells and all.

As a rule, they are not distributed at once, but are sent to Mahim Creek, opposite Bandra, *i.e.*, adjacent to the Mahim Causeway, where they remain for about two to three months in laying in the creek and are allowed to develop. They have to be placed in the beds within 48 hours from the time they were taken out of the sea water originally, as they are stated not to survive beyond that period when out of water.

The quantity sold in the markets of Bombay during the year amounts approximately to 182,500 dozens. To this must be added a large number sold direct to the various Clubs, Hotels and Restaurants in the City without passing through the markets.

The usual practice of the trade is to bring the young Oysters to the layings in Bandra Creek and there allow them to develop. Further reference will be made to these beds.

Bandra Creek.—As we have seen, the Oyster trade of Bombay is concentrated in this Creek, and to a considerable extent so is the mussel trade during certain parts of the year.

The Creek runs approximately east and west and is bounded by Salsette on the north and Bombay Island on the south.

Near its western extremity, it is crossed by the Mahim-Bandra Causeway, in which are constructed a few archways through which the tide ebbs and flows. At its eastern end it is land-locked.

Somewhat to the west of the centre, it is crossed by the B. B. & C. I. Railway. This is also arched to permit passage of the waters.

On its eastern extremity, it is bounded by the G. I. P. Railway line. There is no exit for the waters at this end.

At the south-western end of the Creek near the Causeway, large quantities of dwarf trees or shrubs (mangrove trees) grow. They extend some distance into the Creek.

At each rise and fall of the tide, a rapid flow of water passes under the Causeway and Railway (B. B. & C. I.) arches. The channel of entrance and exit is very narrow however.

At low water, extensive patches of the Creek dry out but not uniformly, that is to say, there are certain areas of water which are cut off from the main bed channel of the Creek by sand-banks, which during high water are submerged. These areas of water form, as it were, small backwaters connected perhaps at one end to the main stream, but owing to the contour of the bed of the Creek not drying out as the tide ebbs.

It is in one such backwater, as described above, that the bulk of the Oysters consumed in Bombay are matured.

As has been mentioned, the Oysters are brought by train either in gunny bags or baskets and by sea lying loose in the bottom of country craft from various places to the Mahim beds; when brought to Mahim, they are usually 1″ to 2″ in diameter (*i.e.*, the fish itself). They are then sorted out according to size and are then placed on the beds, where they remain any length of time from 2 to 12 months, being removed according to rapidity of development. As a general rule, they are never removed unless they have been on the beds for at least two months.

Methods of Supply to the Trade.—The Oysters are brought from the beds to the owner's premises, where they are removed from their shells and washed in cold water. (Usually tap water but, in the absence of Municipal water, well water is used). A few of the dealers sell the Oysters on the foreshore, subsequently removing them to their residences for washing. They are not washed in the Creek.

As a rule, no part of the Oyster is removed, except perhaps in the case of a few retail dealers in the markets who remove the mouths and cut across the stomach. The fisherwomen who usually do this are the few who come from Thana and Salsette by rail and sell retail in the markets. The great majority, including those who supply the leading Restaurants and Hotels, do not remove any parts or clean them in any way beyond a superficial wash.

Those who supply orders to Hotels, Clubs, etc., take the Oysters from the beds about 3 or 4 hours before the time appointed for delivery, shell them and wash them in cold water. Those few who come from Salsette and Thana direct to the markets remove the Oysters from their shells about 12 hours previous to sale. The Oysters are not kept in the creek water after shelling, as they are said not to survive in it; they are placed in cold fresh water frequently changed, in which they are said to thrive.

The Mahim fisherfolk bring the shelled Oysters into the City in galvanized iron buckets or earthenware chatties. Occasionally, copper and brass lotas are used.

From Thana and Salsette they come in copper utensils and galvanized iron buckets, as earthenware chatties are so liable to fracture in transit.

Oyster beds are nine in number and are all situated in the Bandra Creek. Beds Nos. 1, 2, 3, 4, 7, 8 and 9 are all situated in a small backwater, bounded on the west by Mahim Causeway, on the south by a small reclamation formed by City refuge and further along to the east by Mori Road, on the north by a sand-bank submerged at high water and to the east open to the waters of the Creek.

At the west and south-west end of this backwater are large mangrove trees which grow and must considerably interfere with a free circulation of the waters.

On the reclamation mentioned above as forming the south-west boundary of this backwater, there are situated 25-30 huts housing 400 low-caste people, for whose use there are 10 privies on the basket system. There is also a health camp of 25 rooms with 10 privies connected to cesspools. There is, in addition, a stable for 90 bullocks.

Now the whole of the sullage water from the low-caste native camps flows into the backwater. The stable washings also do so.

In addition, the liquid contents of the 10 privy receptacles flow direct into the sea, a few yards away. Further, every day, about 90 cesspool carts empty their contents, consisting of privy and waste-water sullage, into the backwater. The whole of this foul matter from camps, stables, latrines and cesspool carts is discharged within a very short distance of beds Nos. 1 and 2.

The backwater at this place is about 100-150 yards wide by 400-500 yards long and varies in depth from 2′-3′ at low tides to 6′-7′ at high water, *i.e.*, on or about the area where the beds are situated. In comparatively close proximity to the beds are many mangrove trees, and from the configuration of the area in which these beds are situated, it appears improbable that any very thorough cleansing of the backwater occurs at each rise and fall of the tide. The sources of contamination, however, are not confined to the above; for, somewhat to the east of the camp in question is situated a public latrine drained on the closed septic tank system. The latrine has 12 seats and the tank is roughly 10′ × 5′ × 5′ in size.

This tank is emptied as occasion arises, which is usually about twice in a month. It empties into the backwater near beds Nos. 7, 8 and 9.

It will thus be seen that beds 1, 2, 3, 4, 7, 8 and 9 lie in a small basin of water (100 × 500 yards) with a small average depth of water.

Further, it is highly probable that, owing to the contour of the bed of the Creek and other physical conditions, no very great scouring action can take place. To establish this as a fact, however, would require accurate experiments.

Into this area of water, which is situated at a considerable distance from the main channel of the Creek, large quantities of more or less concentrated sewage flow.

Seven of the total number of nine Oyster beds are situated close to where the sewage flows into the Creek.

At an earlier stage, it has been mentioned that the Bandra Creek is land-locked, except at the western extremity. This absence of a free through passage for the waters must, it is anticipated, interfere to some extent with the scouring and cleansing properties usually associated with tides.

It is important, therefore, to ascertain the sources of possible contamination of the waters of the Creek.

Mention has been made already of several sources of gross contamination in the immediate vicinity of the Oyster layings.

There are other sources, however.

It is understood, from inquiries made, that a portion of the sewage of Bandra (population 22,000) is disposed of into the sea at a point to the west of the Bandra-Mahim Causeway and on the north side of the Creek. This place of deposit is roughly opposite Oyster bed No. 6. Another portion of the sewage enters the Creek near Bandra Point.

Depending on the state of the tide at the time of deposit, it is possible that some of the sewage is carried up into the Creek, but experiment is necessary to accurately determine this point.

To the east of the Causeway and on the north side of the Creek are situated the Bombay Municipal Slaughter Houses, stables and chawls. All the drainage and sullage from these pass directly into the Creek at a point not far removed from Oyster bed No. 5. Several privies attached to private premises near by also discharge direct into the waters of the Creek.

At the extreme east end of the Creek, near to Dharavi village, is a small Municipal kutchra reclamation, and in addition there are 35 tanneries in the village of Dharavi, the sullage from all of which passes direct into the Creek.

On the Dharavi side there are four blocks of privies attached to tanneries. These are erected in the Creek itself, consequently all night-soil falls direct into the water.

In addition, there is a public latrine of 20 seats, and the whole of the liquid contents from these passes into the Creek.

It will thus be seen that this comparatively small area of water possesses many sources of contamination, and it must be remembered that such contamination is in a more or less concentrated form, probably more so than the average sample of sewage from a large manufacturing city.

Results of Bacteriological Examination of Oysters derived from the Layings at Mahim.—The procedure adopted was a combination of both methods advocated by Lorrain Smith in his evidence and report to the Royal Commission, *i.e.*, a search was made for any Typhoid Bacilli and also for any bacteria which are known to be due to the presence of sewage in the surrounding water.

The following table shows the results of examinations made :—

Source.	Cholera Bacillus.	Typhoid Bacillus.	Bacillus Coli.	Coli-like Organisms.	Sporogenes Bacillus.	Strepto Cocci.	Staphylo Cocci.	Note. + =Present. — =Absent.
1. Sample from Restaurant in the Fort	—	—		+	—	—	—	
2. Bed No. 2	—	—	..	+	—	—	+	
3. Bed No. 1, Sample 1 ..	—	—	+	..		—	+	
Do. do. 2 ..	—	—	+	..	—	—	+	
Do. do. 3 ..	—	—	+	..	+	—	+	
Do. do. 4 ..	—	—	+	..	+	—	+	
Do. do. 5 ..	—	—	+	..	—	—	+	
Do. do. 6 ..	—	—	+	..	—	—	+	
4. Bed No. 4, Sample 1 ..	—	—	+	..	—	—	+	
Do. do. 2 ..	—	—	+	..		—	+	
Do. do. 3 ..	—	—	—	..	—	—	+	
Do. do. 4 ..	—	—	+	..	—	—	+	
Do. do. 5 ..	—	—	+	..	—	—	+	
Do. do. 6 ..	—	—	+	..	+	—	+	

As will be seen, these samples do not cover the whole range of the Oyster layings. Further samples may be taken and examined, but for the purpose of this Report I have not considered it necessary to postpone its submission waiting for more extensive bacteriological examination, as I consider that the present case is one which can be included in those referred to by the Royal Commission, in their concluding remarks on the application of bacteriology, in the following terms:—

"In case of gross pollution it is obvious that bacteriological examination is necessary; but where the pollution is slight in amount," etc.

From a topographical examination of the Oyster beds, there can be no doubt whatever that they are exposed to serious contamination by concentrated sewage.

This view is supported by the results of the short series of bacteriological examinations made. The organisms present are those usually associated with the presence in water of sewage.

Conclusions and Recommendations.

Practically all the Oysters consumed in Bombay and also those despatched up-country from Bombay are taken from layings in Bandra Creek, on which point the wholesale trade concentrates.

Of the nine layings there, Nos. 1, 2, 3, 4, 7, 8 and 9 are situated in a small backwater into which very considerable quantities of concentrated sewage discharge.

Beds Nos. 5 and 6 are so situated as to be possibly and probably contaminated by sewage discharged from the Bombay Slaughter House and Bandra respectively.

Apart from these practically adjacent sources of pollution, all the beds are situated in a shallow creek into which, in addition, as has already been detailed, much foul drainage and sewage flows.

Little is known of the length of time these beds have been located in their present position or of the circumstances attending the choice of location; but whether by accident or design, or as the result of practical experience, the fact remains that the beds are so situated as to be as near as possible to points where the sewage is discharged.

In view of our present knowledge of the risks of conveyance of disease through Shell-fish, which have been exposed to possible sewage contamination, the continuance of this trade, under conditions at present existing, constitutes a serious menace to the health of the City. It is, perhaps, hardly necessary to add that the risk is by no means confined to those who consume these Shell-fish, because in a City like Bombay, where water carriage system of disposal of night-soil is still in its infancy, the existence of a single case of Enteric is a potential source of many more cases.

To trace the source of infection in cases of Enteric Fever requires the services of highly trained observers and an intelligent and willing co-operation on the part of relatives and friends and of the patients themselves.

Such accurate investigation is now a feature of Public Health Administration in Europe, but even yet difficulties are occasionally met with.

In Bombay an effort is being made to trace such infection, but in the presence of multifarious duties, foreign to the Health Department of European Cities, and owing to the secretive habits of the people frequently resulting in death being the first intimation of the existence of Enteric, it has hitherto been found exceedingly difficult to obtain reliable information.

There is some evidence, however, to show that the consumption of Oysters from these layings was the probable cause in certain instances of Enteric Fever.

The Royal Commission make the following significant remarks:—

"It will be seen from the evidence of Dr. Bulstrode and others, that in the great "majority of the cases in which outbreaks of disease have been clearly traced to "Shell-fish, the fore-shores, layings or ponds from which the Shell-fish have been "procured have been so situated that the opportunities of pollution by sewage have "been obvious and indisputable. That is to say, the layings or ponds in question were "such as would have been condemned on a careful examination by a trained person "without the aid of a bacteriological examination of the water or the Shell-fish. Hav-"ing regard to the number of such fore-shores, layings and ponds obviously liable to "pollution in England and Wales and Ireland, we think that in the light of experience "we are justified in concluding that, if those were closed, or else freed from chance of "pollution, the greater number of cases of disease due to the consumption of conta-"minated Shell-fish would be eliminated.

"It is a serious matter to close an Oyster laying, and it might involve those engag-
"ed in the industry in considerable loss. The step, therefore, ought not to be taken
"merely for reasons which are at present more or less theoretical; there ought to be
"adequate evidence that the laying is really a source of danger to health.

"In our opinion the first step should be to deal with those fore-shores, pits, etc.,
"of which the pollution is obvious and indisputable."

The Oyster beds at Bandra Creek are subject to pollution, both obvious and indisputable, and therefore must be dealt with in one way or another.

The question then arises as to how to deal with them.

The remedies considered by the Commission included—

(1) The seizure and destruction of unwholesome Shell-fish exposed for sale.

For reasons already given, it is obvious that this method of dealing with the situation is impracticable and may therefore be dismissed.

The alternatives left then resolve themselves into—

I. Removal of the sources of pollution, or the purification of the sewage before its discharge into the tidal waters; or

II. The closure of all layings which on topographical or other grounds are found to be dangerous.

In regard to the purification of sewage prior to discharge into the tidal water, the Commission remark:—

"Effluents from sewage farms, as well as effluents from artificial purification processes, usually contain large numbers of micro-organisms, many of which appear to be of intestinal derivation, and such effluents must be regarded as potentially dangerous inasmuch as they may still contain disease organisms. The treatment of sewage according to methods at present in vogue cannot be relied upon to so alter its character as to allow of its discharge in the immediate neighbourhood of Shell-fish layings without incurring appreciable risk of disease being communicated by the consumption of Shell-fish taken from such layings. In such cases, either the sewage outfall must be removed or the layings closed."

Apart from this very definite expression of opinion of the inutility of purifying sewage before allowing its discharge in the immediate neighbourhood of Oyster layings, the circumstances associated with the existing pollution of this Creek would in themselves be sufficient to exclude this method of meeting the situation as being impracticable.

This brings us therefore to the two alternatives—

(1) Entire removal of the sources of pollution; and

(2) Closure of the layings.

The former method would appear to be the natural and rational method of procedure—but, unfortunately for its realisation, there is no drainage system whatever in this portion of the Island, so that it is impossible to connect up these various sources of pollution with the sewers. Further, even if the Bombay side were sewered, there remains the extensive pollution from the Bandra side of the Creek (from Bandra and from the Bombay City Slaughter House and dwellings attached).

As far as the sources of pollution on the Bombay side of the Creek are concerned, their removal would present no difficulty whatever were a drainage system in existence.

It is, of course, possible, even in the absence of such a drainage system, to lessen the extent of pollution and steps are being taken to do so.

Even after the removal of the more avoidable sources of pollution, the risks of contamination are so considerable as to render it desirable to adopt the second alternative as the proper solution of this problem, at any rate until such time as this portion of the Island is completely sewered and Bandra also (or other arrangement made by the Bandra Municipality for the disposal of their sewage).

Consequently, as it is presumed that the fore-shore, etc., is in their charge, the attention of the Collectors concerned should be drawn to the conditions associated with the Oyster trade in this Creek, and they requested to consider the advisability of prohibiting the laying down or taking of Shell-fish for human consumption from any position in this Creek until such time as all possible sources of dangerous pollution have been removed.

The question of compensation etc., if any, is one that lies with the Collector.

A further point which it is desirable to mention is that, in the event of these layings being closed, no new layings elsewhere should be permitted to be opened, until they have been passed as reasonably free from any obvious source of pollution by the Executive Health Officer of the City, if the new layings are on Bombay Island, and by a Government Sanitary Officer, if elsewhere.

Unwholesome Food seized and destroyed.

Action under Sections 415 and 416 of the Municipal Act for the seizure and destruction of unwholesome food was continued, as usual, during the year under report, by the staff of this Department and a list of such articles seized and destroyed in several Wards is subjoined:—

A Ward.—224 Mangoes and 15 Water-melons.

B Ward.—988 Mangoes, 12 Water-melons, 45 various other fruits and one basket of Sweetmeat.

C Ward.—2,756 Mangoes, 590 Guavas, 475 Plantains and 362 Oranges.

D Ward.—360 Mangoes and one big basket of Fish.

E Ward.—1,000 Mangoes and 344 Plantains.

F Ward.—69 Plantains, 22 Water-melons, 570 Mangoes, 3 lbs. of Sweetmeat, 40 lbs. of Onions, 1 lb. of Potatoes, 75 lbs. of Dry Fish and 75 Oysters.

G Ward.—30 Water-melons, 301 Plantains, 70 Cocoanuts, 1,472 Mangoes, 62 Oranges, 98 Lemons, 8 Apples, 2 Pumpkins, 92 lbs. of Pickles of sorts, 292 lbs. of Potatoes, 40 lbs. of Sweetmeat, 51 lbs. of Vegetables of sorts, 130 lbs. of Onions, 961 lbs. of Miscellaneous Fish, 2 lbs. of Parched Grain, 34 Loaves of Bread, 30 lbs. of Bajri-flour, 380 lbs. of Miscellaneous Grain, 8½ lbs. of Curds, 180 lbs. of Wheat-flour, 47 lbs. of Beef, 10 lbs. of Contraband Meat and 20 seers of stale Milk.

Eating Houses of Bombay.

As the result of a detailed enquiry instituted by me it was found that the condition of the licensed Eating Houses was extremely bad, many of them being in a grossly insanitary condition, and the majority insufficiently lighted and ventilated.

In a report to the Municipal Commissioner on the subject, it was suggested that the Commissioner of Police, in whose hands the issue of licenses lies, be approached. This was done and, as a result of the negotiations which ensued, no new license is now (since July, 1911) issued by the Police except in consultation with the Health Department.

In practically every large City in the world, Eating Houses play an important part in the lives of the working classes and the low-paid unskilled and unmarried populace, and judging from the number of such houses licensed in Bombay, a considerable section of the inhabitants rely on such places for their daily food. This fact alone is sufficient justification for insisting on a certain minimum standard of sanitation but when we add to this the fact that, in common with most Oriental cities, Bombay is almost annually visited with epidemics of Cholera and that Dysentery and Enteric are more or less endemic, the importance of protecting the food-supply of the poorer inhabitants frequenting Eating Houses must be at once apparent, more especially perhaps as that section is of migratory habits in the main, and therefore the more likely to widely disseminate disease once contracted.

All the Eating Houses in the City have been divided according to their importance into three classes and a graduated scale of requirements has been drawn up as necessary to be carried out prior to the issue of a license. The requirements include (1) provision for the adequate protection of food from dust, flies, etc.; (2) proper receptacles for the cleanly storage of water, rendered necessary by the intermittent system of supply existing in Bombay; (3) provision of tables covered with some impervious substance capable of ready cleansing, *e.g.*, marble, slate or black tin or zinc; (4) provision of adequate arrangements for washing plates, dishes, cups, etc., and also of proper drainage of the same; (5) provision of receptacles for coal, coke, firewood and also of a sufficiently large receptacle for sweepings and waste food in general.

From this system of co-operation with the Police, a marked improvement has occurred in the condition of the licensed Eating Houses.

But there still exist difficulties in regard to the large number which do not require a license, because kept open at other hours than those between 9 P.M. and 5 A.M.; these are amenable to no discipline and suggestions have been made that they should be compelled to take out a Municipal license; the necessary amendments of the Act are under the consideration of the Corporation, who will in due course move Government to amend the Act.

Sweetmeat Shops in the City.

A very detailed enquiry has also been made into the condition of every Sweetmeat Shop in the City and a report will shortly be made to the Commissioner with suggestions for bringing the trade under some sanitary control.

Bake-houses of Bombay.

In 1904 a systematic inspection of all Bake-houses in the City was made by the Divisional Health Officers and detailed reports submitted.

In addition to the Bakeries proper, there are a number of small shops at which biscuits, etc., are prepared in small quantities and sold on the spot. These places are not provided with proper ovens. Strictly speaking, they are cooking shops where other kinds of food are prepared and sold.

It was found that the majority of the Bake-houses in Bombay complied with the following special rules for Bakeries under the Factory Act in England but were insanitary in many other ways :—

1. That no water-closet, privy or ash-pit be within the Bake-house or directly connected with it.

2. Any cistern supplying water to the Bake-house must be separate from any cistern supplying a water-closet.

3. No drain or pipe carrying off sewage to have an opening with the Bake-house.

It was noticed that " in the vast majority of the Bake-houses, the bread was manufactured by hand and the provisions of Sections 390 and 392 of the Municipal Act were not applicable to them. We could not therefore prevent these establishments being started and carried on in buildings altogether unsuitable for the purpose and our action in respect of them was limited to seeing that they were periodically cleaned and lime-washed." This, however, is not sufficient and if a bread supply prepared under wholesome and sanitary conditions is to be looked for, all Bake-houses will have to be licensed or registered with a view to bringing them under sanitary control."

The requirements necessary to ensure cleanliness in the various processes of bread making and sanitary condition of premises and appliances were detailed and it was suggested that the restrictions proposed be adopted and the sanitary control of the Bake-house left in the hands of the Health Department.

It was, however, not until the Municipal Act was amended in 1911 that Bake-houses came to require a license; ordinary and special requirements have since been prescribed by the Health Department and compliance is insisted on before the grant of a license is recommended. This has ensured certain sanitary improvement but the condition of many of these Bake-houses leaves much to be desired and unless the conditions of the license are strictly enforced and the License Department realise and impress on the licensee the importance of more cleanly methods, the process of producing bread under hygienic conditions is still far off.

Aërated Water Factories of Bombay.

In 1906 an enquiry was made into the condition of Aërated Water factories in the City; and it was found that in many of the establishments, the manufacture of Aerated Waters was carried on under conditions likely to be prejudicial to health. The factory premises were found as a rule to be unsuitable for the purpose as regards position, construction, light and ventilation: the water-supply stored in receptacles which were open to contamination, dirty bottles washed in tubs containing water which, though perhaps clean to start with, speedily became very foul; the whole business of the production and handling of the Aërated Waters was conducted without proper regard to cleanliness.

But it was not until 1911 that the Act came to be amended as suggested. Certain ordinary and special sanitary requirements have since been prescribed and no license is recommended until these are complied with.

VIII.—Municipal Laboratory.

In 1901, the re-organisation of the Health Department being under consideration, the Commissioner and the Corporation were reminded that " a most important part of the Public Health Administration is the provision of a Municipal Laboratory for the bacteriological and chemical investigation and analysis of food and drugs, and although this was proposed in the previous re-organisation scheme it was not provided."

The Corporation realised the necessity and the Municipal Laboratory was established and the City Analyst appointed in 1903; since then, much valuable work has been done: examination of articles of food, such as milk, butter, ghee and of drugs and disinfectants in addition to water and the bacteriological investigation in connection with Infectious Diseases; in more recent years, a certain amount of research work also.

The increasing and interesting variety and volume of work which is being done will be found dealt with in the Report of the Municipal Analyst appended hereto.

IX. Improvement of Insanitary Areas.

In 1897, a year after Plague broke out, the Bombay City Improvement Trust was created by Government to deal with the general improvement of the City, including insanitary areas and houses.

In 1899 and 1900 the question was dealt with by the Corporation. In 1901 the Municipal Commissioner pointed out to that body that the building regulations in force in Bombay were notoriously inadequate and urged "that radical alterations should be effected as soon as possible and especially so in view of the fact that, within the next few years, the Improvement Trust may be expected to clear large areas of insanitary buildings," then existing, which "should be replaced by buildings conforming to a much stricter standard of sanitation."

At the request of the Corporation, a set of draft by-laws was drawn up in consultation with the Executive Engineer and Executive Health Officer and submitted to that body, who recorded them in July, 1901.

In 1903, in a report submitted to the Commissioner on the subject of control of Plague in Bombay (No. 2085P of 18th July 1903), attention was drawn to the fact that the poor were living "an artificial life in houses and under conditions to which they are unaccustomed and unsuited and which render any attempt at sanitation most difficult. . . . The large chawls of four or five floors, separated from one another by narrow gullies, and containing 200 and 300 rooms, with a population of several hundreds of people living under the most insanitary conditions as to air, space, light and the presence of filth inside and around the rooms, constitute in themselves a source of danger to health, and when an outbreak of Plague or other dangerous infectious disease occurs, either by being introduced by human agency or animal agency or dust or filth, the disease will spread rapidly amongst the inmates who are huddled together in a very limited area in contravention of all sanitary principles, and when once the disease gets its foot-hold it is difficult to displace it. . . . What I advise is that all the most insanitary areas be demolished and acquired by the Municipality, Government or Improvement Trust. All these houses which are hot-beds of disease and are, in the opinion of the Health Officer, unfit for human habitation be vacated and not allowed to be occupied until a certificate is produced that they have been made fit for human habitation or newly built. "I specify the areas which are in most urgent need of improvement and places where houses can be erected by the Improvement Trust, Municipality, private enterprise or employers of labour."

The insanitary areas specified were the following:—

1. Nowroji Hill.
2. Kalapani.
3. Madanpura.
4. Tank Pakhadi.
5. Middle Colaba.
6. Kamathipura.
7. 2nd Nagpada.
8. Vithalwadi.
9. Telwadi.
10. Guzri Bazar.
11. Umerkhadi.
12. Kolbhatwadi.
13. Vandekar Lane.
14. Fort North.
15. Tulsirampada (represented in September, 1913).

In representing these areas to the Trust, the Commissioner pointed out that that body "was established as the best agency which could be devised for dealing with the improvement of the City in a comprehensive and reasonably rapid and economical manner; it receives a large subvention from the rates and has vested in it nearly all the vacant Government and Municipal lands in the City . . . and it is a fair question for consideration whether the immediate treatment of insanitary areas, from which disease radiates to the surrounding localities, is not of greater urgency than the construction of streets through the City." (No. 14499 of 27th August, 1903).

Many reports have followed since but progress has been very slow; the subject has been much discussed but nothing done. The result is that to-day the condition of the majority of these areas is as bad as or worse than in 1903.

Of these particular areas, none have been dealt with as such, but many insanitary houses have been demolished by the operations of the Trust in developing new streets and acquiring properties and many new chawls have been built for the accommodation of those displaced, resulting in much benefit to the City; part of Nowrojee Hill, part of Kalapani, part of Tank Pakhadi, part of 2nd Nagpada and Vandekar Lane have been taken in hand.

The Trust wish now to take up the question of improving insanitary dwellings but find their powers under their own Act and the Municipal Act insufficient to deal with them, unless they acquire and demolish wholesale large areas which they find financially impracticable.

Of the amendments and alterations in the Municipal Act suggested in 1901, those dealing with the height of buildings, height of rooms, superficial area of rooms, sites of privies and water closets, air spaces around water closets, abatement of over-crowding, etc., have since been adopted; but the most important suggestion regarding the exterior and interior open spaces around buildings has not yet been carried out.

X. Housing of the Working Classes.

In 1901, it was pointed out that the City Improvement Trust constituted in 1898 had already demolished a large number of houses, without any serious attempt having been made till then to provide accommodation for those displaced; what was urgently required was a class of chawls of not more than three floors, with single rooms, with thorough ventilation and open space all round, suitable sanitary arrangements and at a rent within the means of the poorer classes.

"Much has been written about the conditions under which these poor people live, the over-crowding, poverty and filthy surroundings; the dark, damp, ill-ventilated rooms have been commented on in many reports, but little has actually been done to relieve them."

In my Annual Report for 1902, attention was again drawn to the subject on which many reports had already been made.

In my Annual Report for 1903, attention was drawn to the over-crowding and, in the many reports following, the position of the Working Classes was referred to.

"As the pressure for accommodation is very great, it would be a great boon to the people, if temporary accommodation be provided at places as near as possible to the houses vacated. . .I make these statements with a view to gaining the co-operation of the Trust in doing what we can to lessen the scourge of Plague."

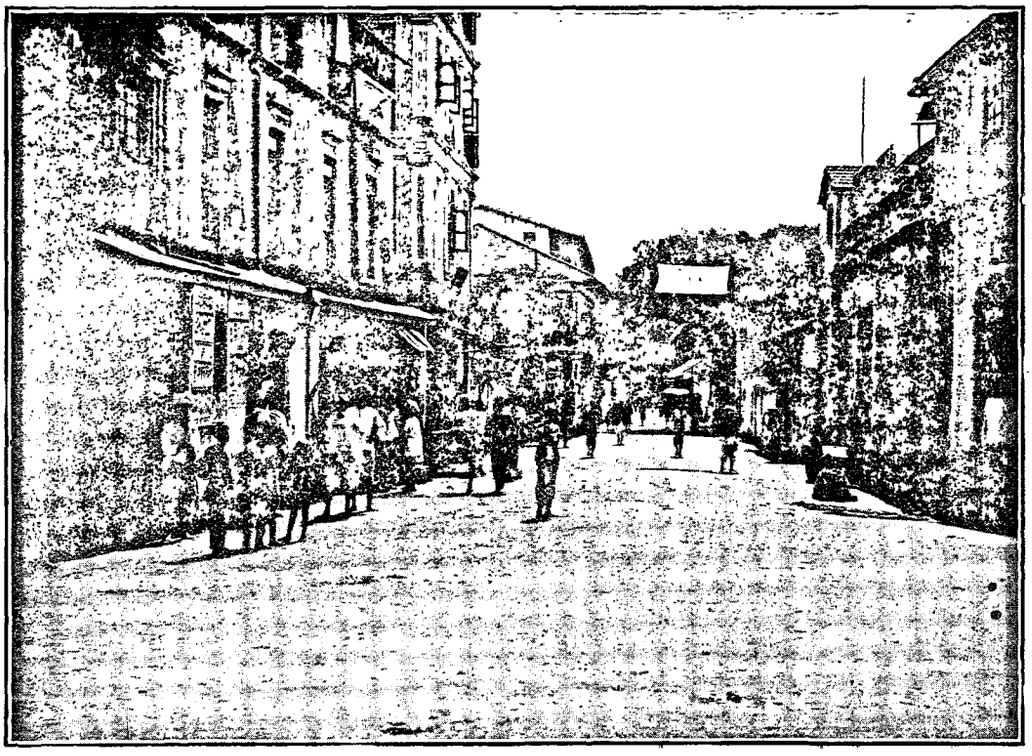
During 1904 this serious question was again prominent and many reports were made on the subject. It was pointed out that while more accommodation was urgently required, what was still more urgent was the manner in which the accommodation should be given and located; that while the standard laid down in England for guidance in erecting dwellings for the working people was not wholly applicable here, it was none the less certain that a standard was necessary and that it should always be high. "To erect a large block of chawls of one pattern of rooms of 100 square feet and allow them to be occupied irrespective of sex and age in addition to goats, fowls, etc., is not the way to diminish over-crowding or solve the housing problem."

"Cheap dwellings should be provided by all employers of labour, where possible, near the work of the labourer. Large employers of labour owe to the City and to their employés a certain responsibility for the housing and care of their work people and, until this responsibility is recognised and immediate steps are taken to provide it, the health of the City must suffer, and, with it, its trade, commerce and prosperity."

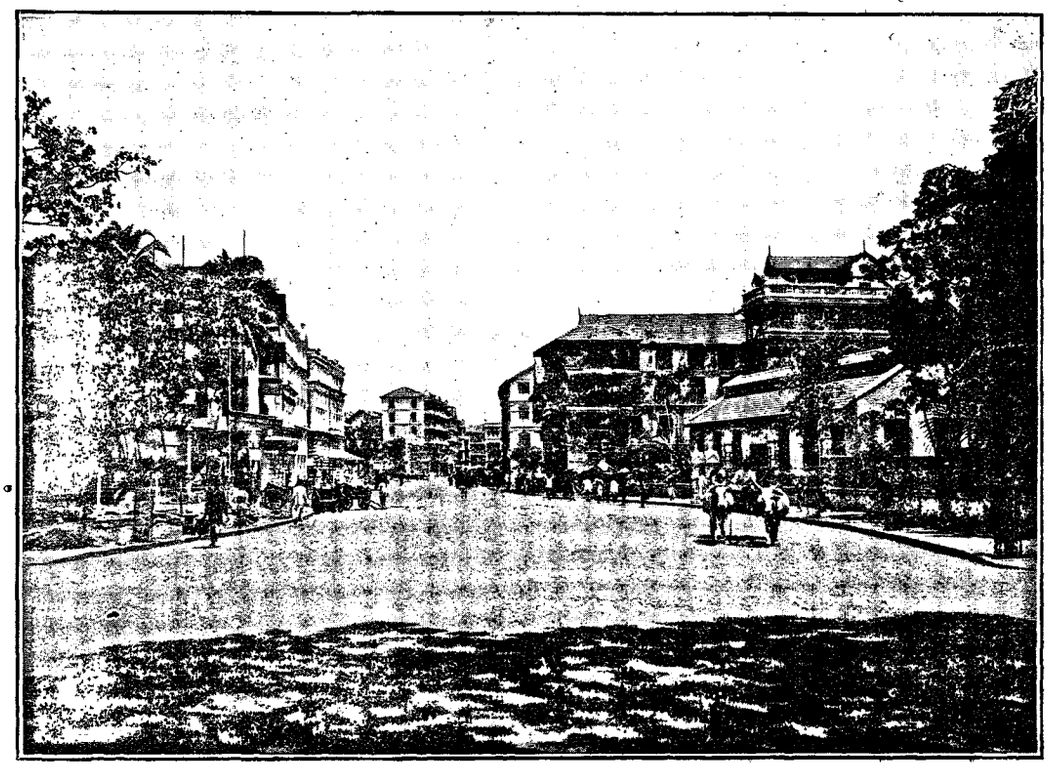
The most insanitary areas were named and it was suggested that provision be made for the inhabitants while the insanitary areas were remodelled. "The Port Trust not only ask us to vacate our camps and Hospital but do not offer any assistance in the way of other accommodation or in the way of obtaining it. The Port Trust land hitherto available for the requirements of the City has to be given up as, owing to commercial prosperity, increased Dock accommodation is considered necessary. It might be argued that the Improvement Trust are doing something in this direction. They have built chawls at Agripada and temporary structures on the Kennedy Sea Face."

But it should be remembered that the demand for an improved sanitary condition of the City created the Improvement Trust. All the available land is under the control of that body, which was brought into existence to abolish the slums, open up the narrow alleys, widen the streets and replace the displaced population and extend and develop the City.

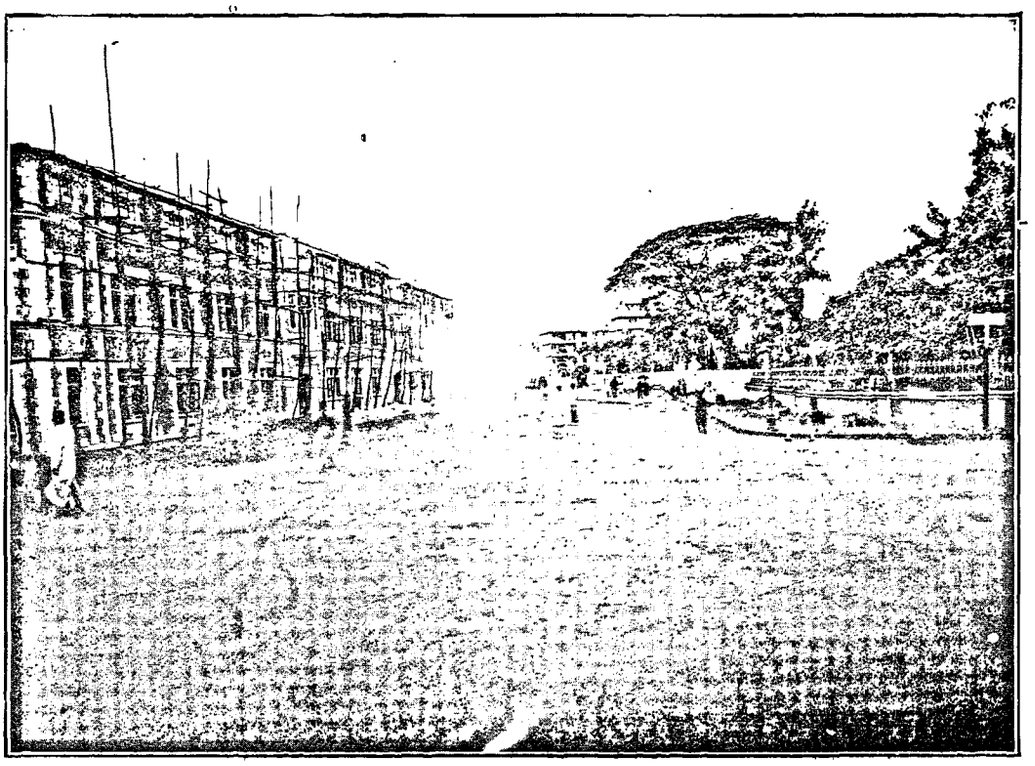
The several independently constituted bodies, the Trusts, the Railway, the Government and the Municipality, all go to make up the City as a whole.



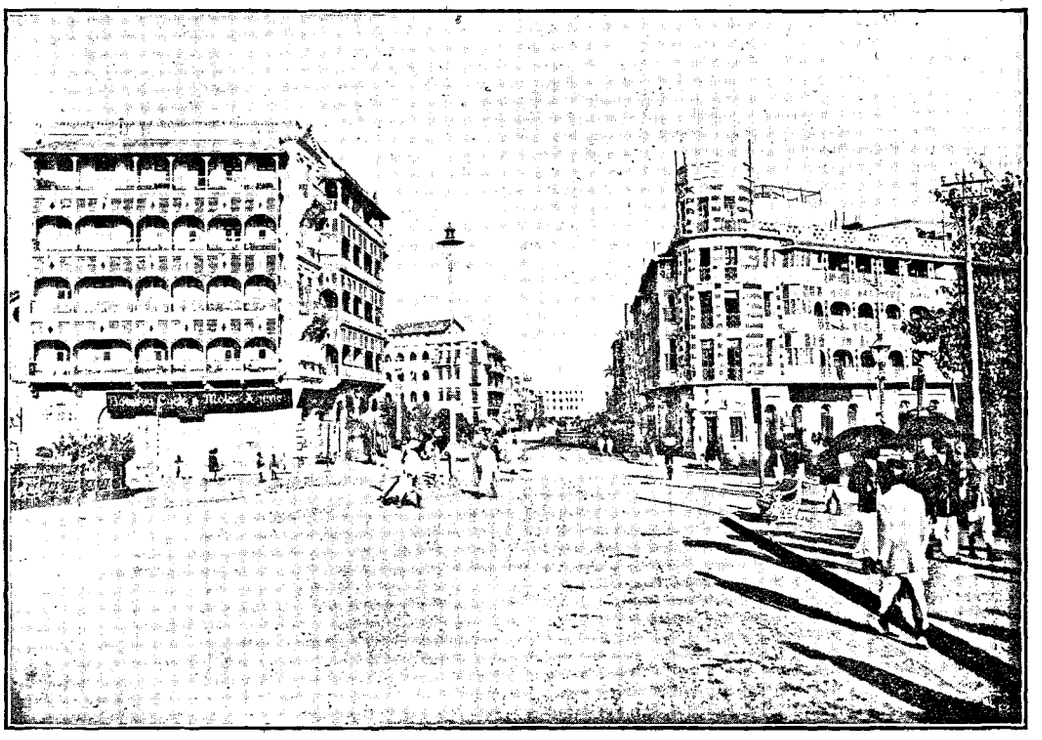
CHUNAM KILN ROAD AT THE GRANT ROAD JUNCTION.
(*Before Improvement.*)



LAMINGTON ROAD LOOKING NORTH TOWARDS ITS JUNCTION WITH GRANT ROAD.
(*After Improvement.*)



CHUNAM KILN ROAD *COMPLETED* AT ITS GIRGAUM BACK ROAD JUNCTION LOOKING NORTH.
(*After Improvement.*)



SANDHURST ROAD FROM SANDHURST BRIDGE WITH THE LESSEE'S
NEW BUILDING (LOOKING EASTWARDS).
(*After Improvement.*)

The two Trusts pre-eminently are created with a view to the general prosperity of the City itself and by assisting in removing insanitary conditions, they will be directly furthering their own objects, and the work of all concerned would be much easier and of great advantage to the City.

"If from the very beginning the existence of over-crowding in the City had been recognised by the authorities, and had they year by year set apart a sum of money for providing permanent or semi-permanent quarters in addition to temporary camps, we should have had a fairly large number of rooms by this time to accommodate some thousands of people."

The Corporation were requested to approach the various bodies with a view to their sharing the responsibility in the matter; to set apart a portion of the annual Government contribution towards Plague camps and add an equal sum of their own and put up a thousand semi-permanent huts—to last 4 or 5 years as a trial—the occupants being charged rent on the basis of expenditure, excluding ground rent and interest on the amount in view of the poverty of the occupants; if this proved successful, more such huts might be put up until we had, say, ten thousand of them and by the time we reached this number, we might expect many private chawls and Trust buildings, etc., to be erected in the City, so the necessity for the Municipality to find accommodation for these people might eventually disappear.

The assistance of the various bodies must be secured in the matter of providing suitable sites for quarters. (Annual Report, 1904).

In September 1904, the Sub-Committee who were considering the matter called for "definite recommendations as to (1) the order in which the building of chawls for begaries and halalkhores in different Wards of the City should be undertaken by the Municipality; (2) the sites on which the chawls should be built; (3) the number and size of rooms each chawl should consist of and the number of persons to be accommodated therein, (4) the estimated cost of land and building, and (5) the source from which the expenditure should be met."

My report was submitted early in January of the following year; the total number of rooms to be provided was estimated at 2,053, each measuring 12 × 10 × 10 feet. The total cost of construction was estimated at Rs. 13,54,344. The Corporation approved of the proposals in 1907, and it was decided that the expenditure was to be met out of Loan Funds and Government were addressed in November 1907 with a view to extending the duration of a loan for the purpose from 15 to 60 years, as otherwise the Corporation "would be building these structures out of current revenue, a method which they consider to be so financially oppressive as to be practically prohibitive."

The loan was sanctioned and raised in 1908, but meanwhile owing to the operations of the Improvement Trust and various other reasons, many of the sites originally selected were not available for the chawls and they had to be given up. In 1908 the question of constructing chawls and stables side by side was considered, as it was thought advantageous to have the work people in the vicinity of the stables. The whole proposal of constructing chawls and stables had therefore to be revised and the preparation of plans and estimates again delayed the progress of the work.

Six chawls have since been constructed in the year marked against each: Valpakhadi (199 rooms) for halalkhores, 1909; Arthur Road, semi-permanent huts for begaries, and two chawls for halalkhores (84 rooms) and begaries (90 rooms), 1913; Cochin Street (90 rooms) for halalkhores, 1913; Jail Road (144 rooms) for begaries, 1914; Tardeo Flats, semi-permanent huts (376 rooms) for Halalkhores and Begaries, 1914-1915.

XI. The Control and Treatment of Tuberculosis in Bombay.

The history of Tuberculosis in Bombay, as dealt with by the Health Department, is as follows:—

At the General Meeting of the British Congress on Tuberculosis for the prevention of Consumption, held in July 1901, certain resolutions were passed, and the Corporation appointed a Committee (Resolution No. 9011 of 17th October, 1901) "to consider the subject in consultation with the Commissioner and the Health Officer and to frame such measures as may be desirable and possible for the purpose of checking Tubercular disease amongst all classes of the population of the City of Bombay."

The Executive Health Officer was asked to submit, for being placed before the Committee, a memo. of suggestions, arranged in order of importance, showing the practical measures that might be taken for the prevention of the disease (*vide* Commissioner's No. 24786 of 12th December, 1901).

Accordingly, I forwarded the following list under No. 16642 of 12th February, 1902 :—

1. Voluntary notification by medical men, to the Health Officer, of every case of Tuberculosis coming to their knowledge.

2. Facilities to be given for a bacteriological examination of sputum sent by medical men to the Health Officer to ascertain whether Tubercular bacilli are present.

3. Instructions to be given how to disinfect a room in which a case of Tuberculosis has occurred and died.

4. Instructions to be given how to disinfect sputum and to prevent the bacilli spreading the disease.

5. Disinfection and lime-washing of every infected house at Municipal expense, where necessary in the opinion of the Health Officer, and systematic lime-washing of every common lodging-house twice a year at owner's expense.

6. Printed instructions in English and the Vernaculars to the people, and instructions by male and female Visitors, as to the precautions necessary to prevent the spread of disease and notices posted as to spitting.

7. Prevention of over-crowding in houses, factories and workshops.

8. Ventilation of houses, printing Offices and Workshops, and removal of dust from wool and cotton cleaning godowns and all trade processes causing pollution of air liable to affect the lungs and pre-dispose to infection.

9. Provision of sanatoria for isolating and treating cases of Tuberculosis.

10. Inspection of milk and meat supplies and analysis of milk.

The suggestions, along with the Committee's Report, were approved and adopted, and a copy forwarded to the Commissioner and the Health Officer for guidance. (Corporation Resolution No. 922 of 5th May, 1902.)

In October 1902, the Government of Bombay issued a Resolution (No. 5570, General Department, of 9th October 1902) publishing the remarks of the Government of India on the Resolutions passed on the subject of Tuberculosis by the British Congress and requested the Municipal Commissioner, Bombay, to take such action as may be deemed necessary with reference to the suggestion in para. 3 of the letter from the Government of India:—

"In the 5th Resolution, the Congress have also suggested that Medical Officers of Health should use all their powers to prevent the spread of Tuberculosis by means of milk and meat. This suggestion is of importance mainly in municipal areas, where some Officer of the municipal body usually has power to inspect materials of food and drink."

As the reorganisation of the Health Department was under consideration, long before the issue of the Resolution, the establishment of a properly equipped Municipal Laboratory and the appointment of a Municipal Analyst for the examination of milk, ghee and other articles of food were suggested.

The Laboratory was established and the City Analyst was appointed in April, 1903.

The appointment of Food Inspectors and the necessary amendments of the Municipal Act (Annual Report for 1903) were suggested.

In 1903, a report on the Milk Supply of Bombay was submitted, and several suggestions made for providing a certified milk supply.

Fresh proposals on the subject were submitted in 1904 at the request of the Corporation (Annual Reports for 1904 and 1905).

In my Annual Report for 1908, the measures suggested by me in 1902 for the prevention of Tuberculosis were referred to and it was pointed out how the adoption of those precautionary measures appeared to have borne some fruit in the large number of notifications received every year and the steady decline in the annual mortality from the disease. In 1902, the mortality from the disease stood at 3,957 (5·09 per 1,000 of population); it fell to 3,567 in 1906 (3·61), 2,877 in 1907 (2·94) and 2,387 in 1908 (2·44).

In 1910, investigations were carried on by the Health Department into the subject of infected or Tuberculous milk and sputum and the results were embodied in my Report published in 1911 on "How Tuberculosis is spread in India."

Leaflets on the precautions to be taken are distributed, and lectures given at frequent intervals. The Municipal District Nurses and the Health Visitors of the Bombay Sanitary Association make frequent visits to houses and advise the parents and relatives.

The question has been before the Corporation on several occasions. (See report of the Committee, 1902) and certain recommendations were made.

The disease has been notifiable in Bombay since 1903, though the number of cases notified by medical men is small compared with the number of cases occurring.

In my report on "How Tuberculosis is spread in India" (1911), I dealt with a large series of experiments on sputum and the question of the part played by milk in the spread of Tuberculosis in India and made suggestions as to the control of the disease.

The investigation carried on by the Health Department was the first investigation into the subject in India and I advised further inquiry.

The conclusion come to was that, so far as these experiments had shown, Tuberculosis in cattle is rare in Bombay.

It was pointed out in the Report that the subject was worth considering further, but with the pressure of work this was impossible in the Health Department of the Municipality; and suggested that it be taken up by the Parel Laboratory to whom I would give all assistance possible.

The results of my investigation were :—

(1) That cattle in Bombay, and presumably other parts of India, do suffer from Tuberculosis to a slight extent.

(2) That it is possible to infect milk by human agency, owing to the habits and customs of the attendants and the method of distributing milk.

(3) That a possible source of infection is the fæces of infected cattle, due to the intimate connection there is between the labouring class and the cattle and the enormous use made of cowdung in houses and surroundings.

Later on, Major Gloster, I.M.S., carried out at the Parel Laboratory the examination of 100 samples of single cow's milks in Bombay for Tubercle bacilli by animal tests and in no case were the guinea-pigs found to have developed Tuberculosis.

For many years, the City of Bombay was passing through a series of epidemics of Plague, Small-pox, Cholera and Malaria, and the energies and resources of the Health Department were taxed to the utmost, as during these years the various re-organisations and re-arrangements of the Health Department to a certain extent handicapped its efforts towards measures for the control of Tubercular and other diseases and it was impossible to deal on a large scale with the particular subject which has only recently been so fully developed in England.

The wave of Anti-Tubercular measures which spread all over the world during the past few years reached India. Mr. Ratan Tata offered a large annual contribution towards a scheme for the control of Tuberculosis in Bombay Presidency; the question was also engaging the attention of Government, and in February 1912 His Excellency the Governor called a public meeting at which the King George V Anti-Tuberculosis League was inaugurated with the Executive Health Officer and his Assistant for Infectious Diseases as Honorary Secretaries.

The Scheme has now been working three years; the Medical Officer of the League sends a list to the Health Department, every month, of cases coming to his notice and these names are passed on to the District Registrars for such action as may be necessary and possible.

XII. Abatement of Smoke Nuisance.

In 1905, the Corporation invited the attention of the Municipal Commissioner to "the ever increasing smoke nuisance in the City" and asked what steps he intended to take so as "to have it mitigated immediately in the interest of Public Health." (Resolution No. 146 of 10th April, 1905).

In the reports of this department it was pointed out that the subject had engaged its attention since 1899 and the attention of the owners of several mills in the City had been drawn to the nuisance but without effect: the amendment of Section 391 of the Act was therefore suggested so as to make it agree with Section 91 of the Public Health Act of England, 1875; and the appointment of a Special Inspector with special qualifications was recommended, as the Health Department staff had not the necessary engineering knowledge. (Nos. 4249 of 3rd June 1905, 8054 of 17th July 1906.)

In 1906, the Corporation asked for a report as to the measures that had been taken within the preceding two years by the Municipal Authorities to remove or lessen the smoke nuisance in the City and suburbs from (1) the Municipal works, (2) the Government Dock-yard, and (3) the mills, factories and bake-houses throughout the City and suburbs.

Under the existing law or the common interpretation of it, there was no hope of effectively combating the smoke nuisance in Bombay; as though many prosecutions were instituted, only very few were successful. Since then many reports were submitted on the subject; and amendments of the Act suggested. (Nos. 13889 of 2nd September 1908, 19627 of 12th November 1908, etc.).

In my Annual Report for 1907, attention was drawn to the subject: "Public attention has very rightly been directed to the great nuisance caused by the mill chimneys in the City emitting volumes of black smoke. It is not an unusual sight to see a black pall overhanging the Island in the mornings, especially between November and March, thus indicating the amount of impurities that are discharged into the atmosphere by these mill chimneys. In view of the existence of so many effective appliances for the better consumption of coal and the consequent reduction in the amount of smoke produced, it is possible to carry on mill industry without creating so much smoke."

In 1909 the Corporation vetoed my proposal for the appointment of a Special Inspector, being informed by the Commissioner that the amendments of law recommended had been prepared by Government and were shortly to be introduced in Council. (Resolution No. 4907 of 25th November 1909).

We had however to wait until 1912 before the Bombay Smoke Nuisances Act was passed; and the Bombay Smoke Nuisances Commission came into being to supervise and control the working of the Act, which came into force on 13th June, 1912; rules framed by the body under Section 11 of the Act to carry out its objects were finally sanctioned by Government in 1913 (9th April, 1913).

First Annual Report of the Bombay Smoke Nuisances Commission.

The first Annual Report of the Commission covering the period from 1st February 1913 to 31st March 1914 was issued in the year under report. The results of the working are indicated as under:—

The first week's observations in February showed the average emission of smoke in scales 6-4 of Ringlemann's Smoke Gauge to be 11½ minutes per hour of dense black smoke.

Considerable reduction however followed as the result of the Chief Inspector's instructions and advice to Engineers and firemen as to improved methods of stoking and the means by which smoke could be reduced without loss of boiler power. By the end of September, the average emission of smoke in scales of 6-4 was reduced to an equivalent of 1·61 minutes of dense black smoke per hour. Observations taken in March 1914 show that it was an equivalent of 1·38 minutes of dense black smoke per hour.

The report further states that, during the year, four complaints were received from the public of cases of smoke nuisance and promptly inquired into and necessary remedies adopted.

Seven statutory warnings (4 in respect of factories, 1 potteries and 2 others) were served for smoke nuisance offences committed; the remedies adopted in these cases were the raising of chimneys and alterations in furnaces. It has been found difficult to control smoke emitted from Railway Locomotives as they are seldom stationary for long.

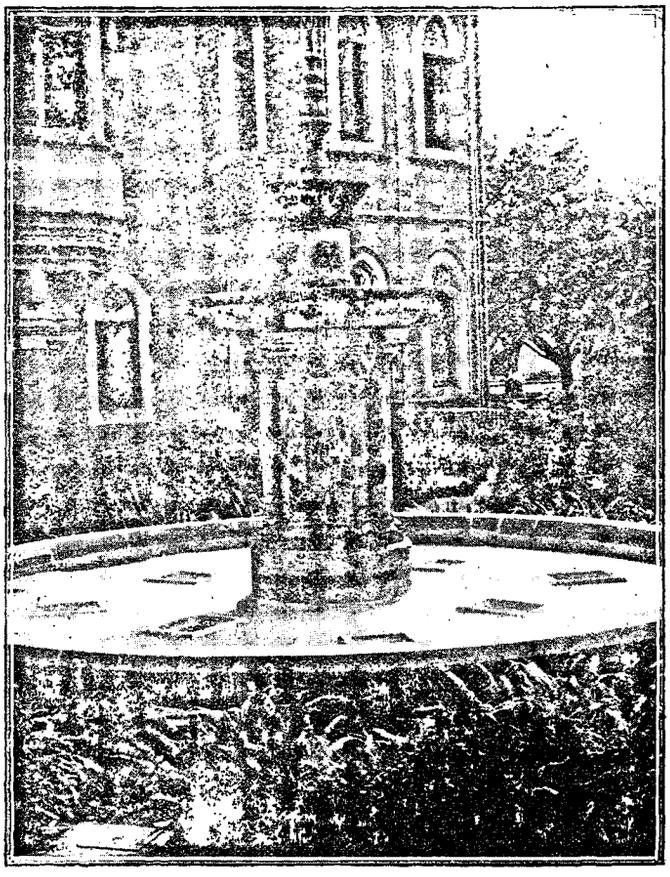
315 chimneys have been brought on the Register.

The Commission have submitted proposals to Government for instituting a system of training stokers in methods of firing, under which the training should be carried out by the Smoke Nuisance Inspection Staff and Certificates of Competency awarded to those who pass the required test of efficiency.

XIII. Malaria and Anti-Malaria Measures.

The mosquito-malaria theory was accepted in 1900; and ever since, the Health Department has not only been advocating measures for the extermination of Malaria from Bombay, but also actively carrying them out.

During 1901 and 1902, investigations into the prevalence of Malarial fevers were made and reports submitted to the Corporation. The Divisional Health Officers instructed their staff into the methods of distinguishing the various mosquitoes and larvæ and a list of places was made out where anopheles larvæ were found, and suggestions made to get rid of the existing and potential breeding places of mosquitoes.



FOUNTAIN IN THE HEAD MUNICIPAL OFFICE PROTECTED WITH RE-INFORCED CONCRETE AGAINST MOSQUITO BREEDING.

"To get rid of the larvæ from every haunt of the mosquito all at once is, however, a vast undertaking and would require a large staff and expenditure; but the continued efforts of the Health and Engineer's Departments, combined with a spread of the knowledge of the subject amongst the population, should do a great deal in mitigating the evil." (Reports under Nos. 13567 of 19th December 1901, and 6620 of 29th July 1902).

During the third quarter of 1908, a wave of Malaria severer than usual swept over India, and Bombay suffered in common with the rest; and reports on the prevalence of Malaria and anti-Malarial measures taken and suggested, with an enumeration of the various breeding places in the City of the Malaria—bearing mosquitoes, were from time to time submitted to the Commissioner and the Corporation.

In 1909 Government, at the request of the Corporation, appointed a Malarial Expert to inquire into the causes of the prevalence of Malaria and suggest a remedy; and later on a Committee representing the Municipality, the Port and Improvement Trusts and the Railways was associated with him for assisting with their local knowledge and advising as to the measures which he might propose for adoption.

The Health Department furnished Dr. Charles Bentley, the Government Expert, with reports of Malarial cases treated at the Municipal Dispensaries and made arrangements for the collection and examination of blood of patients.

In July, Dr. Bentley submitted two Reports on his work pointing out the steps to be taken "with a view to mitigating the disease during the present season and eventually attempting its complete control." Subject to a few details, there was nothing in his Reports which was new or had not already been said by the Health Department in its various reports on the subject; all the measures advocated by him, with the exception of a special staff and legal action, had been taken by this Department for the past seven years.

The Corporation appointed a Committee to consider the Reports in consultation with the Commissioner, and the Health Officer's Report No. 18322 of 23rd August 1909 advised a programme of work which was approved and adopted; the small special staff suggested by me was sanctioned for a period of six months.

In 1911, Government forwarded a copy of Dr. Bentley's reports to the Corporation and invited the body "to carry through the operations to success without delay" and promised to "give steady support to their endeavours."

In 1912, in accordance with the recommendations made by Dr. Bentley, a Special Malaria Department was organised from the middle of April; a staff of four Inspectors, 38 Sub-Inspectors, 82 begaries with a separate clerical establishment was organised and placed in charge of the Senior Deputy Health Officer, Dr. K. B. Shroff, as Special Assistant to the Health Officer for Malarial operations.

Vigorous measures have since then been taken towards getting rid of the breeding places of mosquitoes in the City, by closing or filling in infected or insanitary wells, etc.

The results are indicated in the following Statement and are exceedingly satisfactory:—

—	April 1912-December 1914.
No. of wells filled in	450
No. of wells hermetically covered	921
No. of wells covered with trap-doors	1,093
No. of wells covered, etc., without resort to legal action	1,207
No. of wells, etc., reported to the Standing Committee or the Municipal Commissioner	1,118
No. of wells, etc., in which sanction of the Standing Committee or Municipal Commissioner was received	1,066
No. of houses inspected by the staff, including repetitions	601,940
No. of notices issued re cisterns, &c.	1,372
No. of cisterns hermetically covered	4,279
No. of children examined for spleen	40,986
No. of blood slides examined	4,257
No. of larvæ samples classified	7,443
No. of lectures delivered	24
Quantity of quinine distributed	114,730
Grs. ii	30,600
Grs. iv	84,130
No. of pools treated with Pesterine	98,587
No. of odd receptacles removed	3,878

XIV. Medical Inspection of School Children.

In 1911, a full report was submitted on the Medical Inspection of School Children, which is considered one of the most important measures of Public Health.

Medical Inspection at School concerns the State, the Public Health and the Individual.

If the work of School Medical Inspection is of such value in England, it must be doubly valuable in India, where Malaria, enlarged Spleen, Intestinal Diseases and Worms, etc., have to be added to the list of ailments met with in that country.

In Bombay, we have (in 1911) 239 Primary Schools—both Municipal and aided—with about 25,000 pupils; and over 200 such unaided Schools with more than 13,000 pupils.

Thus 38,000 pupils are a very considerable proportion of the City's School-age population and the need for a measure that will help to improve the health and physical condition of such a large number of our future citizens needs no emphasis, whether from the stand point of Public Health or Education. The need is all the greater as the mass of poor and ignorant population is so much larger and the elementary laws of health and hygiene are so ill-understood.

It was not suggested that the School Committee of the Bombay Municipality rush at once into a large staff of Medical Inspectors as in England, but gradually adopt a scheme which would prepare for future development.

It is necessary that the work begun should not be allowed to lapse and the Health Department must press the Corporation to adopt a reasonable and suitable scheme.

The Report was forwarded to the Schools Committee, who decided that a physical census of children attending the Municipal Schools should be taken, in the first instance, by the Health Department and asked for an estimate of cost. This was done and the estimate furnished (Resolution No. 5189 of 1st December 1913). The Corporation then requested the Health Officer to undertake the examination of the children with the staff to be employed by the Schools Committee for the work. Three Medical Inspectors were appointed and the work commenced in June 1914 and appears to have just been concluded. *Ad interim* reports, it is understood, have been submitted by the Inspectors and the Schools Committee have now appointed a Sub-Committee to go into the whole question and report on the advisability of having a permanent staff; its strength, duties, emoluments, etc. (Resolution No. 471 of 11th March 1915).

Condition of Primary Schools in the City.

In 1911 (May) my Assistant Dr. Goldsmith prepared at my request a comprehensive report on the Sanitary Condition of Primary Schools in the City.

The total number of Schools inspected from all the Wards was 125; and it was found that, judged by the most lenient standards, the condition of many of the Schools was such as to call for an early remedy. Of the total number examined, the following percentage failed to meet the minimum requirements mentioned under the various heads:—

Surroundings.	Cubic space per head.	Floor space per head.	Light and Ventilation.	Closets.	Urinals.	Water-supply.
39·2	61·4	61·8	16·8	61·6	84·0	81·6

It was therefore recommended that a building before being rented or leased, as a School, should be certified by the Executive Engineer and the Executive Health Officer as suitable in regard to lighting, ventilation and provision of sanitary conveniences; that the existing method of storage of water being objectionable in practically all the Schools, the Water Engineer should propose a suitable scheme of storage of drinking water; that Schools, already in the occupation of the Schools Committee, should again be visited by the Assistant Health Officers with a representative of the Committee and certified whether suitable or otherwise and the latter should be vacated; that the erection of new Schools should be conducted on special lines—a separate standard being laid down in regard to air, space and lighting.

Protection of Bombay from Outside Infection.

Bombay is one of the greatest business centres in India. People from all parts of the world who are connected with and interested in its commercial prosperity as well as others flock here in numbers. In 1904, attention was drawn to the urgency of exercising some sort of control and supervision over arrivals by land and sea, pilgrims and others, from outside infected places. "The mortality at times reaches an appalling figure when these people come from places where epidemics of one type or another are prevailing. I have pointed out that in other Cities this indifference and callousness to the sudden rise in the population of a specified locality, by the arrival of a large number of people from infected localities, would not be tolerated without previous intimation to the Sanitary Authorities and the necessary arrangements being made for the protection of the rest of the inhabitants. As for pilgrims, they come in large numbers and it is always better to provide accommodation for them outside City limits."

In the years that followed, epidemics or outbreaks of Small-pox and Cholera demonstrated how the history of these diseases in the City was a history of continual importations from outside and frequent were the representations made for protecting the City by the imposition of some restriction on arrivals from infected places.

Among pilgrims, those returning from Jeddah—where Small-pox is always prevailing—are a recurring and serious menace to the health of the City ; apart from the fact that they are not protected by vaccination in infancy, the housing and sanitary arrangements made for them during their sojourn in Bombay are also necessarily inadequate owing to their exceedingly large numbers, and suggestions were made from time to time for the provision of suitable camps for them outside the City.

It was after years of persistent representation, that my recommendations to bring some pressure to bear on the pilgrims with a view to their being vaccinated prior to embarkation found favour with Government.

In 1908, the Haj Committee was constituted by Government with the Commissioner of Police as President for, among other things, superintending the arrangements for the reception and despatch of many thousands of pilgrims passing annually through Bombay on their way to and back from Jeddah. (Government Resolution, General Department, No. 5497 of 5th September 1908.)

Since 1910, as a result of the issue of orders by Government it has been possible for this Department, with the co-operation of the Haj Committee, to vaccinate an increasing number of pilgrims in Bombay : 45 per cent. in 1910 and nearly 78 per cent. in 1914. Extra staff is every year engaged for this purpose, including a lady Vaccinator for female pilgrims for whom special arrangements are made. The Government of India also having addressed at the same time other Local Governments and Local Administrations, it is found that a large proportion of pilgrims are vaccinated before they leave their homes for Bombay on way to Jeddah.

In 1912, the Government of India appointed a Committee for a comprehensive inquiry into the possibility of improving sanitary arrangements at centres where Hindu and Mahomedan pilgrims congregate for worship or for starting their journeys to holy places; the Government of Bombay have nominated some members to sit on the Committee including non-official Indian gentlemen and representatives of Railway Administrations concerned in pilgrim traffic in the Presidency. The Sanitary Commissioner with the Government of India, who is the President of the Committee, will draw up a report on the conclusion of the several inquiries. (Government Resolution, General Department, No. 6176 of 19th September 1912.)

Since 1913 special arrangements are made in Bombay during the outward pilgrim season for the medical inspection of Mussafarkhanas and Rest-houses by appointing a Sub Assistant Surgeon who has also to detect and report any cases of Infectious Diseases among pilgrims.

The foregoing is a running survey of the various questions, comprised in the programme which was laid down nearly a decade and a half ago, made with a view to indicating the process of evolution up to the stage in which we find them in 1914 in the hope that it may provide a guide for further progress.

The survey illustrates how the improvement that is noticed in the Public Health conditions of the City is the result of progress along various lines of Sanitary Administration, which aims at amending the physical condition of a community by actively seeking to ameliorate the surroundings and circumstances by which they are occasioned.

The work done under the heads specified is, however, an inadequate representation of the activities of the Health Department during the period, as many of those included in the programme assumed, in course of time, a new and a wider interest and importance, and a number of kindred problems arose from time to time and claimed attention.

There are besides a few facts and events which find no place under the programme and may be mentioned on account of their relation to the Public Health Administration of the City.

Censuses.

In 1906 a Census of the City was suggested by the Health Officer and taken, with the sanction of Government, by the Health Department assisted by Mr. Wagh—as the results of the decennial Census of 1901 were found not to correctly represent the real state of the population in normal times—having been taken at the height of the Plague epidemic when a large exodus of the population had taken place.

The decennial Census operations of 1911 were entrusted by Government, with the sanction of the Corporation, to the Executive Health Officer who was again assisted by Mr. Wagh.

There were, besides on a small scale, two enumerations of children up to two years of age in 1913 and 1914, made with a view to gauging the accuracy of the birth returns of the City.

Instruction to People in the Elements of Health and Hygiene.

The efforts—which have borne some fruit—towards the dissemination of an elementary knowledge of sanitation and hygiene among the poor and ignorant of the City, of the cause and prevention of disease and the precautions to be taken, by means of classes, lectures, and demonstrations and homely talks and distribution of leaflets with a view to assisting the people to appreciate the value of sanitary measures and co-operate with the authorities; these efforts have brought the people in sympathetic touch with the Health Department as nothing else could have done and have been made through the agency of the Bombay Sanitary Association which was started in 1903 and has recently established the Sanitary Institute for securing wider opportunities towards the same end on a more comprehensive scale.

Factory Labour Committee.

In 1906 the services of the Executive Health Officer were asked for by the Government of India in connection with the Factory Labour Committee. The Corporation agreed and he was deputed to serve on the Committee from December 1906 to April 1907. On the Report of the Committee, a Factory Commission was appointed and their Report is being dealt with by the Government of India.

Fever Committee.

Owing to the prevalence of Malarial and other Fevers on an extensive scale in the City, the Corporation requested Government (Resolution No. 2951 of 25th September 1905) to co-operate in finding out the causes and conditions that helped to spread the Fevers and a representative Committee was appointed in 1906 and the services of Dr. D. A. Turkhud, who was attached to the Health Department, were placed at the disposal of the Committee to help them in their investigation. Extensive inquiries were made and two reports submitted, in consultation with the Executive Health Officer, to the Surgeon-General with the Government of Bombay.

Transfer of the Vaccination Department.

The Presidency Vaccine Establishment passed over to the Municipality (Health Department) from Government in 1909, as a result of the re-distribution of financial burdens under the Police Charges Act III of 1907; the concentration of administrative control, advocated by me for several years past, was thus secured; the number of Public Vaccine Stations has since been increased and many improvements made.

The Cost of the Health Department.

During the past fourteen years the City has expanded—the number of buildings, Streets, Roads, Mills, Factories has increased, Railways have enormously developed. Medical Relief, Registration of Births and Deaths, Vaccination and Municipal Laboratory have all been added to the Health Department work.

Considering the expansion of Bombay and the extent to which the sanitation of the City has developed, the cost is *pro rata* less than in 1901, and the amount spent for Public Health Administration should be considerably increased. Whether it be looked at from the point of view of the cost per 1,000 of population, or the cost on the ratable value, or in the particular items of General Supervision or Conservancy, the same decrease is observed.

In 1901, the population of Bombay was roughly 776,000. The cost of the Health Department per head of the population was 38 annas *exclusive* of Plague which was Rs. 4,43,000.

In 1913, the population of the City was 979,445, the cost per head was 35 annas *exclusive* of Plague which was *Rs.* 1,50,000, *but including Malaria,* Rs. 83,000.

In 1901, the ratable value of the City was Rs. 2,86,41,750, with an income of Rs. 48,69,000.

In 1913, the ratable value of the City was Rs. 5,07,00,000, with an income of 85 lakhs.

The cost of the whole Health Department in 1901 was equal to a rate or tax of 6·2 per cent. of the ratable value.

The cost of the whole Health Department in 1913 was 4·2 per cent. of the ratable value.

The cost of the General Supervision of the Health Department is less per 1,000 of the population than in 1901.

The cost of the Conservancy of the City is less per 1,000 of the population than in 1901.

The cost of Infectious Diseases is less, while Medical Relief, Registration of Births and Deaths, Malaria and Vaccination are higher because of the improved methods and more extended operations.

Progress Reviewed (1901-1914).

Progress has been made under the following headings :—

Registration of Births and Deaths is much better but is still defective.

Dispensaries have done well but require proper accommodation.

Plague, Small-pox, Malaria, Tuberculosis and other Infectious Diseases have been materially reduced.

Vaccination is now under the Health Department.

The measures for reducing Infant Mortality show some improvement.

Our proposal for adopting a system of School Medical Inspection was adopted and put in force for six months. Its importance cannot be overstated and the matter should be taken up without any delay as one of the most vital importance.

The Conservancy System of the City shows progress. The motor service has greatly facilitated the removal of refuse, but there is still room for improvement by the adoption of Incinerators and the improvement of the Drainage and Water Supply and increase in the supervision of the staff.

The Reclamation of the low-lying land at Clerk Road is proceeding.

The hospital accommodation for Infectious Diseases is insufficient and was the subject of many reports and proposals are before the Corporation.

The housing of the labour staff proceeds very slowly.

The improvement of the insanitary areas represented in 1903 makes very little progress. The operations of the City Improvement Trust have opened up many narrow overcrowded areas and made extensive improvements in many directions, but many insanitary areas still remain.

Progress has been made in the condition of the Milch Cattle and Horse Stables, but there is a great deal yet to be done.

The Eating Houses, Soda Water Factories, Bake-houses are slowly improving.

The work of demolishing houses "U.H.H." by the Municipality is practically *nil*.

The conversion of the old basket privies into W.Cs. makes very slow progress. Thousands of insanitary gullies exist which are a nuisance and danger to health.

The condition of many of the sewers and house drains and storm-water drains has been reported on from time to time and, although being gradually improved, leaves much to be desired.

It has been frequently pointed out how the work of the Health Department of Bombay differs from that of a large City in Europe, how many and how difficult the problems are, and if we have made any progress it is to a great extent due to the guiding influence of the Municipal Commissioner and the general support of the Corporation combined with the constant supervision, the education of the people in the value of sanitary measures and to the harmonious working of the Department with the co-operation of the public.

The experience of the Deputy Health Officers in the Public Health Administration of a Ward, when they were first appointed, was not large and they have been pressed for more work, year by year, to which they have willingly responded.

There is still much room for improvement in many directions and, considering all the circumstances, the class of work done by the Deputy Health Officers now (with some exceptions) is certainly better.

In addition to the programme alluded to, many delicate and intricate duties have been placed upon them and they have done their best. In addition to the regular routine work of their Wards and the control of Infectious Disease, they have to supervise the Registration of Births and Deaths, enquire into the installation of any trade process, the condition of Eating Houses, Soda Water Factories and Bake-houses, Bullock and Horse Stables and Milch Cattle Stables, Malaria and Tuberculosis and Vaccination.

If their work was onerous and responsible when they were appointed in 1907, it is doubly so now, with the ever-increasing demand for better sanitation and keener supervision and the rapid development of the City, and calls for some consideration by the Commissioner and the Corporation.

We have in the past had to contend with the outbreaks of Plague, Small-pox and Cholera and the staff had always to be on the alert and ready for any emergency.

Although Plague has materially decreased, we have always to take precautionary measures and the Deputy Health Officers and District Registrars have to be ready to arrange for removal of cases and evacuation of houses and to supervise the Health Camps as in the past.

On the introduction of Cholera from outside, the staff are told off to watch the Railway Stations; and the Railway Companies are requested to co-operate and any suffering case is removed to Hospital from the train; the contacts segregated and the houses visited; in spite of this, the disease gets through at times and all our efforts are required to combat it. Much has been written on the subject and we have successfully controlled many introductions of Cholera about which little has been heard.

Small-pox declines to *nil* at times, but is re-introduced by pilgrims and Goanese, the majority of whom are unvaccinated. Vaccination of pilgrims leaving and returning to India was urged by us from 1904 and put in force in 1910 and our staff now vaccinate many thousands of pilgrims annually.

The work of the Health Officer and his Assistants and staff is no sinecure and they must be ever on the alert and actually in touch with every case of Infectious Disease which occurs in Bombay, and some consideration should be given to the work done by the Deputy Health Officers and the District Registrars and staff which brings them daily in contact—in all conditions of climate—with all forms of Infectious Diseases.

The supervision of the Conservancy work of a Ward, which is at present one of the duties of a Deputy Health Officer, is a very responsible and onerous task. A Deputy Health Officer who carries out successfully the duties of administering a large Ward should receive encouragement in the shape of increase of pay.

Work done by the Department: Appreciation.

The work at the Arthur Road Hospital and Maratha Hospital has been comparatively light, but Dr. Choksey is able to show a reduced incidence in the death-rate from Cholera and Plague in Hospital.

The Municipal Laboratory has been very busy and Dr. Joshi, the Municipal Analyst, shows again how the work is increasing.

Dr. Shroff shows in his Report how the work of the Malaria Staff has succeeded in reducing Malaria in the City.

Dr. Nerurker, the Superintendent of Vaccination, has again carried out the work of the Vaccination Department very satisfactorily.

The clerical work of the Head Office continues to increase consequent on the many calls on the staff for extra work in connection with the developments of the Public Health Administration of the City. Mr. N. S. Kowshik, the Chief Clerk, who, in addition to his own duties, had to supervise the work of the Registration Branch of the Head Office and to a great extent perform the greater part of the work of the Head Clerk, which he did to my utmost satisfaction, Mr. Nagindas Jamnadas and the rest of the staff worked untiringly and met the ever-increasing demands on them in a way which I appreciate most thoroughly.

The extra work thrown on the out-door staff due to the War, when thousands of troops, horses, foot and artillery came into Bombay and were encamped in different parts for weeks and under very difficult conditions, was carried out willingly and with great success and it is pleasing to record that great satisfaction was expressed by the Military Authorities at the result of the work and by the Corporation in granting a bonus to those immediately concerned.

PUBLIC HEALTH DEPARTMENT,

Bombay, 6th May 1915.

J. A. TURNER, M.D., D.P.H.,

Executive Health Officer.

Annual Report of the Arthur Road Hospital for the year 1914.

I.—Administration.

1. There were no changes in the staff during the year.

II.—General Statistics.

2. The total number of admissions was 826, as compared with 791 and 1,540 in 1913 and 1912 respectively. The maximum number of patients present on any particular day was 74, as contrasted with 82 in 1913 and 176 in 1912.

3. The principal admissions were from Small-pox, 283; Cholera, 137; Measles, 71; and Chicken-pox 34. Among the unusual cases admitted, were the following:—

(*a*) One case of Diphtheria in a Parsee child; (*b*) one case of Scarlet Fever, the patient being a Corporal of the West Kent Regiment, Territorial Forces, and (*c*) two cases of Ptomaine Poisoning. All these cases recovered.

This was the first instance in the history of the Hospital when patients suffering from Scarlet Fever and Diphtheria were admitted.

4. The following Table shows the details of admissions, deaths, recoveries and case-mortality rate per cent:—

Diseases.	Admissions.	Deaths.	Recoveries.	Case-mortality rate per cent.
Small-pox	283	70	213	24·73
Chicken-pox	34	.....	34	.....
Measles	71	3	68	4·22
Cholera	137	46	91	33·57
Whooping Cough	9	.....	9	.....
Erysipelas	8	.....	8	.....
Relapsing Fever	1	.....	1	.....
Mumps	6	.....	6	.....
Plague	6*	3	.....	.....
Diphtheria	1	.....	1	.....
Scarlet Fever	1	.....	1	.....
Ptomaine Poisoning	2	.....	2	.....
Observation Cases	267	73	194	27·30

* Three cases were transferred to the Maratha Hospital.

5. Sixty pilgrims were admitted during the year, as compared with 16 only in 1913. Whereas there was not a single admission from Small-pox last year, 51 cases were admitted in 1914; the other cases comprised,—Cholera 3, Measles 1, Diarrhœa 4, and Dysentery 1. There were 15 deaths from Small-pox and one each from Cholera, Measles and Diarrhœa.

IV.—Small-pox.

6. Small-pox prevailed during the first five months of the year, as also in November and December. The number of admissions was 283, as compared with 206 in 1913. The case-mortality rate was about the same as last year indicating that the cases were not of a severe type.

(*a*) *Small-pox Fatality among the Pilgrims.*

7. The cases among pilgrims are divisible into 3 groups: (*a*) unvaccinated, (*b*) vaccinated in infancy and (*c*) vaccinated in Bombay before their departure to Haj.

There were 8 unvaccinated cases with 4 deaths and 4 recoveries; among those vaccinated in infancy, there were 27 admissions with 9 deaths and 18 recoveries and lastly among those vaccinated in Bombay, prior to their departure there were 16 admissions with 2 deaths and 14 recoveries. The rate of case-mortality was therefore 50 per cent. 33·33 per cent., and 12·5

per cent. respectively. The occurrence of Small-pox among the pilgrim so recently vaccinated requires some explanation. Their case-mortality rate indicates that vaccination did protect them to a certain extent, though not wholly. It does not therefore mean that vaccination was either inefficient or perfunctory; but at the same time, it reveals the existence of a flaw somewhere in the chain of events. There is good reason to suspect that it is not at all uncommon for Pilgrims to rub off the lymph after inoculation and thus render the process either partially or completely useless. If this presumption is correct, the remedy is obvious, *viz.*, stricter supervision during vaccination.

(*b*) *The Vaccinal Condition of Small-pox patients.*

8. The following Statement compares the vaccinal condition of Small-pox patients during the last 6 years, as also the rate of case-mortality among the vaccinated, as compared with the unvaccinated. It shows that the mortality rate among the latter was uniformly higher than amongst those protected by even a single vaccination in infancy. It was almost invariably twice as high and has been found to be almost four times as high as in 1911. The advantage accruing from protection would be still more evident, but for the fact that almost all the Goans although computed as vaccinated in accordance with their statements, are not at all or but very imperfectly protected, as shown by the absence of cicatrices in the great majority of cases. It would not be therefore at all unreasonable to assume all Goan patients as unvaccinated in future :—

Year.	Vaccinated Patients.		Unvaccinated Patients.	
	Number.	Case-mortality rate, per cent.	Number.	Case-mortality rate, per cent.
1909	226	14·1	187	42·2
1910	399	18·0	286	41·9
1911	202	10·8	138	39·8
1912	426	16·9	232	40·51
1913	132	18·18	71	36·62
1914	182	19·23	101	33·66

(*c*) *The Vaccinal Condition of Children under* 10 *years.*

9. The information required by Government Resolution, in the General Department, No. 3231 of 21st May 1912, as to the vaccinal condition of children of 10 years of age, who were admitted for and died of Small-pox during the year is as follows :—

Year 1914.	Vaccinated.				Unvaccinated.			
	Admitted.	Died.	Recovered.	Case-mortality rate, per cent.	Admitted.	Died.	Recovered.	Case-mortality rate, per cent.
1 to 6 Months	...	.....	...	.....	2	2	...	100
7 to 12 „	2	.....	2	.....	1	1	...	100
1 to 5 Years	10	1	9	10·00	6	2	4	33·33
6 to 10 „	12	2	10	16 66	16	4	12	25·00
Total ...	24	3	21	12·50	25	9	16	36·00

The foregoing Table shows that the rate of case-mortality was lower in the protected children when compared with those unvaccinated. There is no doubt that the rate could be still further reduced, if all the children were vaccinated in Bombay, which is not unfortunately the case. It is not possible to determine the efficacy of vaccination as practised in small towns or villages or the conditions that militate against its success, in the absence of available data.

V.—Cholera.

10. During the last ten years (since 1905) an almost uniform method of the treatment of Cholera has been adopted at this Hospital. Briefly summarised, it comprises :—

(*a*) Internal administration of Mercuric Cyanide in solution in doses of grain one-tenth every hour in the acute stage and at longer intervals when the stools have become infrequent, as also in the stage of collapse.

(*b*) Internal or subcutaneous use of Adrenalin or Renagladin with or without Piturtrin every two to four hours as required; Spartein sulphas is given in addition in doses of grain one-quarter to one-half after the urine begins to be secreted.

(*c*) Normal or Hypertonic Saline (according to Rogers' formula) per rectum 2 pints every six hours and in very grave cases or when rectal is not retained subcutaneously 2 pints twice daily.

(*d*) Subcutaneous injections of sterilised camphorated oil (20 per cent.) in doses of 2-3 c. c. every 4 hours or at longer intervals as necessary.

(*e*) Cupping over the loins followed by poultices.

(*f*) No alcohol, no milk, strong coffee with or without sugar; iced water and ice freely. The rationale of this line of treatment has been fully discussed in previous Reports.

11. The treatment differs from that of Lieut.-Col. Sir Leonard Rogers, I. M. S., in as much as no Potassium or Calcium Permagnate is exhibited and secondly intravenous injection of saline is replaced by subcutaneous or rectal methods owing to their simplicity and the absence of skilled assistance and laboratory facilities. And moreover the staff deal with intravenous injections on a large scale, as there is always a sudden rush of patients during an epidemic.

12. The above treatment has, however, considerably reduced the case-mortality rate among Cholera patients. Prior to its adoption, the mortality rate was 75 per cent. among 930 cases treated upto 1904. Since then it has been reduced to 50 per cent. in 1,234 patients. To put it in other words, the rate of recovery has been actually doubled, that is to say from twenty-five to fifty for one hundred admissions. The above result has been still further improved upon during the last two years, the recovery rate having reached to 66 per cent. This improvement was mainly due to the use of subcutaneous injection in all cases of grave collapses. In 189 cases treated during 1913 and 1914, there were 63 deaths and 126 recoveries, the rate of case-mortality was therefore 33·3 per cent. The cases treated were of a severe type and clinical analysis indicated that 75 per cent. were in the stage of grave collapse: 50 per cent. had no perceptible pulse at the wrist, and the urine was completely suppressed in every case.

13. Whenever Cholera prevails in Bombay, it has been characterised by a severe type and heavy mortality. Excluding Hospital admissions, there were registered in this City during the last ten years 8,687 cases with 7,920 deaths among them. The mortality rate therefore was about 91 per cent. Having regard to this as also to the clinical data above referred to, it is obvious that the cases treated were neither early or in the first stage of Cholera, nor of a mild type. The results should therefore be regarded as encouraging.

14. The death causes among the 63 deaths were Uræmia 45; Toxænia 7; Pneumonia 6; and Exhaustion 5. Two patients developed double Parotitis with considerable œdematous infiltration of face and neck and two died from Uræmia supervening after partial resecretion of urine.

15. Among the cases that recovered the following complications were noted:—Resuppression of urine in 4; Hæmaturia in 3; Pneumonia in 1 and Parotitis in 1. One case was complicated with benign tertian Malaria and in another, Measles developed on the eight day after admission, the patient having become infected with Cholera during the incubation period. Cases of such and other mixed infections has been occasionally observed; for instance Cholera has been noticed to occur during the apyrexial interval of Relapsing Fever and has also co-existed with Plague and Pneumonia.

16. Subcutaneous injections were administered through a Rogers' glass bulb of 20 oz. capacity with a short piece of tubing and needle properly sterilised and supported on a tripod stand by the bed side.

The saline was sterilised by a boiling and was administerd in the axilla, abdominal wall or the flank. They were well borne and not followed by abscesses except in rare instances in patients with thick skins. Some reaction of the system as indicated by the rise of temperature was observed in 11 cases out of 149, but only after the second injection. The range of temperature varied between 100°-103°. Diarrhœa was observed to recur in some cases, indicating that rapid absorption of saline, by whatever method administered, was liable to equally rapid elimination.

17. Reference was made in the Report for 1912 to the marked variation in the mortality rate of Cholera among different races. Further experience corroborates the same.

The following Statement of patients treated during the last five years shows that Parsees had the lowest rate of mortality and that Europeans and Eurasians had a slightly higher rate. The incidence among Hindus, Mahomedans and Native Christians did not very materially differ. The same differences has been observed in relations to other diseases, like Small-pox and Plague. Europeans have always had the lowest mortality rate in the former:—

Races.	Admissions.	Deaths.	Recoveries.	Case-mortality rate, per cent.
Hindoos	458	203	255	44·3
Mahomedans	149	70	79	46·9
Native Christians ...	76	34	42	44·7
Parsees...	32	8	24	25·0
Europeans	16	5	11	31·2
Jews	5	4	1	80·0
	736	324	412	44·00

18. The Hospital staff has worked zealously and Mr. A. DeSilva, resident Hospital Assistant, was unremitting in his efforts as usual.

ARTHUR ROAD HOSPITAL,
12th April 1915.

N. H. CHOKSY, M.D., F.C.P.S.,
Special Assistant Health Officer,
in charge, Arthur Road Hospital.

Report of the Maratha Plague Hospital for the year 1914.

I.—Administration.

1. The only change in the staff during the year was the appointment of Miss Guidera as Nurse in place of Miss Doutre who resigned.

II.—General Statistics.

2. The total number of admissions was 466, as compared with 437 and 311 during 1913 and 1912, respectively.

3. The admissions from Plague numbered 410, as contrasted with 392 in 1913 and 238 in 1912.

4. There were 26 cases admitted under observation as against 45 in the previous year, of which 7 died and 19 recovered.

5. The case-mortality rate among the Plague cases was 75·45 per cent., as compared with 74·74, 73·10 and 74·8 during the three previous epidemics.

6. The number of European and Anglo-Indian patients admitted for Plague was 5, of whom 4 died and one recovered.

III.—The Treatment of Plague by Iodine.

7. The advocacy of the treatment of Plague by Iodine by Commissioner Booth Tucker having attracted considerable attention, an effort was made to give it a fair trial during the epidemic of 1914. Two series of observations may be noted here. In the first series, 10 patients were treated, of whom 8 died and 2 recovered. In the second series, 33 patients were taken for observation, and every alternate case was treated with Iodine, the untreated case serving as a control. Among the 17 cases thus treated 14 died and 3 recovered. Among the 16 control cases there were 10 deaths and 6 recoveries. All the above cases were undoubted cases of Plague. Each patient treated with Iodine was given 5 minims of the tincture with one ounce of water four times a day, and tincture Iodine was applied locally in addition. These results did not indicate that the treatment was of any value among the class of patients treated at this Hospital.

8. Subsequent to the above observations, and under instructions from the Government of India, Major W. Glen Liston, C.I.E., I.M.S., Director of the Bombay Bacteriological Laboratory, undertook a fresh series of observations combined with blood examination in order to determine under what circumstances treatment by Iodine gave good results. His observations have been embodied in his Report for the year 1913, and are as follows:—

"Experiments were made to test the efficiency of the treatment of Plague cases by Tincture of Iodine when administered (*a*) by giving five drops every three hours by the mouth while Iodine was applied locally to the buboes; and (*b*) by injecting seven minims of the Tincture in Saline Solution intravenously once every twenty-four hours as advocated by Captain Powel Connor, I.M.S. These methods of treatment were compared with that ordinarily adopted by Dr. Choksey in the Maratha Plague Hospital.

"Clinically the cases were recognised to be undoubted cases of Plague by Dr. Choksey and with a view to determining the severity of the disease in each case, a bacteriological examination of the blood was made and the cases classified into four groups as we found; (1) no Plague bacilli present in one-quarter of a cubic centimeter of blood, (2) some but less than ten Plague bacilli present in one-quarter of a cubic centimeter of blood, (3) more than ten but less than one hundred bacilli in one-quarter of a cubic centimeter of blood, and (4) more than one hundred Plague bacilli in one-quarter of a cubic centimeter of blood.

"The result of the examination of the blood of a large number of Plague patients (more than 500) by this method had previously shown that all persons with a larger number of Plague bacilli than ten in one-quarter of a cubic centimeter of blood invariably die while a proportion of cases with no Plague bacilli or less than ten Plague bacilli in one cubic centimeter of their blood recover. This classification of cases is necessary when estimating the value of any form of treatment for Plague.

"In the present series there were 60 cases of Plague, 20 of these cases received the ordinary treatment adopted by Dr. Choksey at the Maratha Plague Hospital, 20 were treated as described above, with Tincture of Iodine by the mouth, while 20 others were treated by the same drug administered intravenously.

"The Table below shows the classification of the cases and the result of treatment in each group of cases. The Table shows that of the 20 patients on ordinary treatment (the controls) 5 recovered and 15 died. In this series of cases 11 were placed after bacteriological examination of their bloods taken at the time of their admission to Hospital in one or other of the invariably fatal groups, while 9 were classified in the groups in which recovery was

possible. Seven of these latter cases showed no Plague bacilli in one-quarter of a cubic centimeter of their blood.

TABLE SHOWING THE RESULT OF TREATMENT AND CLASSIFICATION OF CASES.

Kind of Treatment adopted.	Cases with no bacilli in 25 c. c. of blood.		Cases with some bacilli but less than 10 in 25 c. c. of blood.		Cases with more than ten but less than 100 bacilli in 25 c. c. of blood.		Cases with more than 100 bacilli in 25 c. c. of blood.		Total Treated.	
	Recovered.	Died.	Recovered.	Died.	Recovered	Died.	Recovered.	Died.	Recovered.	Died.
Controls on Ordinary Treatment ..	4	3	1	1	..	3	..	8	5	15
Iodine administered by the mouth ..	6	3	2	1	..	1	..	7	8	12
Iodine administered intravenously ..	3	4	..	3	..	3	..	7	3	17
Total ..	13	10	3	5	..	7	..	22	16	44

"Of the patients treated with Iodine by the mouth, twelve died and eight recovered; but in this series there were only eight cases placed in the fatal groups, while as many as nine showed no bacilli in their blood at the time of admission.

"Of the patients who received Tincture of Iodine by intravenous injections, seventeen died and three recovered; but in this series ten were classed in the fatal groups, while only seven showed no bacilli in their blood at the time of admission to Hospital.

"Excluding the invariably fatal cases with many Plague bacilli in their blood before treatment was begun, we have four recoveries out of nine cases among the control cases, eight recoveries out of twelve cases treated by Iodine by the mouth and three recoveries out of ten cases by Iodine intravenously.

"The number of cases treated in each series is not sufficiently large to allow of any definite conclusion to be made regarding the comparative efficiency of any of the methods of treatment. It will be observed that while the cases which recovered after treatment with Iodine by the mouth were more numerous, the number which recovered after the intravenous injection of Iodine were less numerous than those treated by Dr. Choksey's method.

"The number of cases treated is however large enough to show that the simple treatment recommended by the Salvation Army authorities has not yielded in our hands so high a percentage of recoveries as the cases reported by Commissioner Booth Tucker in the "Pioneer" of the 4th May 1913. This may be due to the fact that firstly, our cases generally came under treatment at least twenty-four hours after the onset of the symptoms of the disease because the patients had to be sent to the Hospital, and secondly, because all our cases were undoubtedly severe forms of the disease, they were all so seriously ill that their transfer to Hospital was necessary. It is well known that in the presence of an epidemic of Plague, many persons suffer from enlarged and tender glands. These persons often present no other symptoms of the disease and they generally speedily recover. No cases of this type were included in our series but some mild cases of this nature may have been included in the series reported in the "Pioneer" by Commissioner Booth Tucker. In short, the cases treated by us were all suffering from a severe form of the disease and treatment was generally begun at least twenty-four hours after, generally a longer period after the onset of the symptoms.

"The cases reported by the Salvation Army Authorities probably included among them some mild cases, and it appears that treatment was in all cases begun early after the onset of the symptoms."

9. The above results show that in the sterile cases Iodine exhibited by the mouth gave a lower mortality rate than in the control cases similarly treated. On clinical analysis, however, it was noted that 5 out of the 6 cases who recovered under Iodine treatment were of a comparatively mild character.

10. Summarising the results on the whole, the treatment of undoubted cases of Plague by Iodine does not hold out any great hopes of saving more lives than heretofore. It is probable that the successes claimed were due as Major Liston observes to cases either very early and of a very mild type or among cases of Pestis Ambulans, who generally recover without any treatment.

N. H. CHOKSY, M.D., F.C.P.S.,
Special Assistant Health Officer,
In charge, Maratha Plague Hospital.

Dated 9th April 1915.

Report on Malaria Operations for the year 1914.

With reference to the Health Officer's No. 30557 of 17th December 1914, I have the honour to submit my third Annual Report on Anti-Malarial work done in the City for the year ended 31st December 1914.

2. Two Malaria Inspectors Drs. Gimi and Dovelay resigned their posts and in their places Drs. Bellimal and D'Costa were appointed.

The services of a third Malaria Inspector were dispensed with and in his place one intelligent Sub-Inspector was appointed on Rs. 50—5—60.

3. The services of five Sub-Inspectors were reduced owing to work being greatly decreased.

4. One Malaria Inspector Mr. Rawal attended the Malaria Class at Delhi, under Major R. Christophers, I.M.S., and passed the examination at the end of the term.

5. Major F. Harvey, R.A.M.C., acted for me from 20th April 1914 to 9th July 1914 while I was acting as First Assistant to the Health Officer in the arrangement of Dr. Goldsmith acting as Health Officer.

6. The routine of the work was the same as was done during the preceding years.

7. The Cawasji Patel Tank was completely filled in during the year.

8. The work in connection with the filling in of Mustan Tank and Nawab's Tank in Mazagon is still in progress, the Corporation having sanctioned a grant of Rs. 61,519 to meet the cost.

9. *Nakhoda Tank.*—The Corporation under their Resolution No. 8222 of 26th February 1914 have recommended that this tank be filled up and that two-thirds of the reclaimed area be leased to the authorities of the St. Xavier's School for being used as a playground and that in the remaining area besides the facilities for the washing of the clothes, a drinking fountain and a cattle trough be provided.

10. The following big tanks were filled in or covered over during the year :—

(*a*) Big quarry hole in Sankli Street belonging to Messrs. Moolji Jaitha & Co.—Filled in.

(*b*) Tank attached to Shankerset's Temple on Tardeo Road.—Filled in at Municipal expense.

(*c*) One tank attached to premises No. 513 (5), Thakurdwar Road.—Filled in at Municipal expense.

(*d*) Tank in Lady Northcote Hindoo Orphanage.—Filled in at Municipal expense.

(*e*) Mr. Muckba's Tank on Parel Road.—Hermetically covered and handpump fixed.

(*f*) Tank in Mrs. Powwala's compound, Khetwady 10th Lane.—Covered over with stone slabs leaving a trapdoor and a rotary pump attached.

(*g*) Tank in Shankerset's compound, Girgaum Road. (Old Girgaum Swimming Bath).—Filled in at Municipal expense.

(*h*) Tank attached to a Temple in Hansraj Lane.—Covered over with concrete with a trapdoor at Municipal expense.

(*i*) Tank in Cooper's Cotton Cleaning Factory, Bellasis Road.—Filled in by the owner. A grant of Rs. 500 was given to him out of the Government Grant as help.

(*j*) Tank in Mr. Adenwalla's compound, Tardeo Road.—Filled in.

(*k*) Big underground masonry tank in Watson's Annexe, Apollo Bunder.—Filled in.

(*l*) Gamdevi Tank.—Covered over with concrete with a wire gauze trapdoor and one wire gauze opening and a stepdoor of wire gauze at Municipal expense.

(*m*) Vithoba Tank.—Work will shortly be started on the same lines as Gamdevi Tank.

11. *Bhuleshwar Tank.*—Correspondence is still running and the following report was submitted to the Municipal Commissioner by the Executive Health Officer on the three following minimum requirements suggested by the Municipal Commissioner :—

(1) The raising of the tank to a level which would prevent sub-soil water coming in, through sides or bottom, and also from sullage matter coming in from Municipal drains.

(2) The reduction in the area of the tank by three-fourths so as to allow of a supply of Municipal water being given.

(3) Paving of floor and pointing of walls with cement.

"(1) This is, of course, an engineering question on which I do not propose to advise. I would, however, point out that the height of the sub-soil water and condition of the house drains and privies and heavy fall of rain in the monsoon should be considered. The immense advantage of the filling in of the tank and the acquiring of a set-back, would be to the locality, should not be lost sight of. It appears to me that there will be many difficulties hereafter if the tank is not filled up to road level, and it is doubtful whether the proposal to prevent the sub-soil water and sullage water getting into the tank is feasible.

(2) Is necessary.

How often is it proposed to completely empty and clean the small tank, that will remain.

It is to be filled with Municipal water I understand.

In the past the water in the tank has frequently been nearly related to sewage and a more or less constant breeding place for mosquitoes.

Mere reduction in size will not in any way remove these objections, in fact, if anything the former objection will be accentuated, as presumably the same number of pilgrims will frequent the Temple.

I am strongly of opinion that a maximum period should be fixed, at the expiry of which the tank must be emptied and cleansed by the owners without reminders, &c., from this Department. This maximum period should not exceed 7 (seven) days.

Further, special powers should be reserved to call upon the owners to empty and cleanse the tank whenever called upon so to do.

(3) Is very necessary.

If, in spite of these alterations nuisance results, either from foul water or from mosquitoes, the measures provided for in Corporation Resolution No. 5175 of 5th December 1912, should be enforced, namely, filling in of the tank, and the owners should be informed of this possible contingency.

I am still of opinion that the best course and the only really satisfactory one is to completely fill in the tank. and provide small well constructed and drained bathing places, and lay out such portion of the reclaimed tank as remains after the set-back has been enforced as a garden.

I understand that the measures proposed are purely tentative, and that the ultimate measures depend on the amount of attention paid by them to the proper sanitary condition of the small tank and surroundings, and that neglect on their part will result in complete enforcement of the measures referred to in the Corporation Resolution quoted above.

I, however, consider that tentative measures of this nature only delay progress and as the question has been pending for many years, efforts should be made to abate this nuisance and improve the part of the City."

12. The following tanks are still under correspondence :—

(*a*) Bhagirthi Tank in Dadyset Agiari Street.—Time given for 6 months to comply.

(*b*) Pit in Arthur Road belonging to Government and leased to Mr. Ramchandra Balaram.—Time given to fill in upto the middle of 1916.

(*c*) Mahalakshmi Temple Compound Tank.—Kept under observation.

(*d*) Tank belonging to Mr. Essa Alli, Grant Road.—Time given upto 16th April 1915.

(*e*) Tank in Byculla Gold Mohor Castle Compound.—Under action.

(*f*) Tank in Old Government Mouse, Parel.—The matter of filling in this tank is still under consideration of Government.

(*g*) Surya Kund Temple Tank, Mazagon.—Under fish trial and kept under observation.

13. *Mint Tank.*—The Mint Master reports that the Government of India is considering the question of having Mint machinery driven by electricity instead of by steam as at present, and that when this work is completed, the Mint Department will be in a position to fill in the tank and that the work will be executed within the next 2 or 3 years. The Municipal Commissioner has therefore decided that no further action for the closing of the tank be taken and that it should be adequately stocked with fish.

14. The following Table shows the work carried out by the Executive Engineer in connection with private wells out of the Government grant :—

Situation of the well.	Area of the well.	Nature of requisition carried out.	Cost of work.
			Rs. a. p.
12, Nanabhai Lane	3′-8″×2′-9″ ..	Covered over with concrete and a wire-gauze trapdoor.	14 2 3
80-84, Bazar Gate Street..	2′-6″×2′-10″ ..	Hermetically covered over with concrete.	6 3 1
322-330, Bora Bazar Street	6′-6″ ..	Covered over ½ with wiregauze and ½ with concrete work leaving trapdoor.	37 12 8
20, 3rd Marine Street	4′×4′-8″ ..	Hermetically covered over with concrete.	16 5 4
48-50, 2nd Fanaswadi	5′-2″×6′-4″ ..	Covered over with concrete and a wire-gauze trapdoor.	34 3 5
12-13, Karelwadi	2′-7″×4′-6″ ..	Hermetically covered over with concrete.	10 2 8
2, 2nd Khaterali Lane	7′-6″×7′-8″ ..	Do. do. ..	50 5 0
388 (10), Girgaum Road	....	Filled in	547 8 4
63-65, Dadyset Agiari Lane	6′ dia. ..	Covered over with concrete and a wire-gauze trapdoor.	30 5 1
47, Newwadi	5′-3″ dia. ..	Do. do. ..	24 8 3
15-17 & 19-21, Newwadi	8′-10″ dia. ..	Covered over with concrete and wire-gauze trapdoor on each side.	75 0 9
58, Banganga	9′-9″×12′-3″ ..	Covered over with concrete and a wire-gauze trapdoor.	139 3 11
3A & 3B, Dammer Lane..	12′×9′ ..	Do. do. ..	130 6 7
479, Walkeshwar Road	18′-3″ ..	Do. do. ..	348 13 1
471, Falkland Road	5′-6″ ..	Do. do. ..	25 15 7
Tank at Lady Northcote Hindu Orphanage.	....	Filled in	190 2 4
Strangers' Home, Mazagon	....	Do.	252 14 2
Tank at 8-9, Bellasis Road	....	Do.	500 0 0
12-14, Mazagon Road	12′-6″ ..	Hermetically covered over with concrete.	138 1 0
19, Mount Road	19′-6″ ..	Do. do. ..	391 15 8
St. Peter's School, Mazagon	37′ dia. ..	Covered over with concrete and a wire-gauze trapdoor.	1,554 14 1
7, Victoria Road	19′ ..	Covered over hermetically with concrete.	372 1 6
284-86, Haines Road	11′ ..	Covered over with concrete and wire-gauze trapdoor.	110 6 0
9, Gunpowder Road	13′-6″ ..	Do. do. ..	165 12 4
1237, Parel Village	16′-6″ ..	Hermetically covered over with concrete.	286 14 7
Tank at Shankerset's compound, Tardeo Road.	25,548 c. ft. ..	Filled in at Municipal expense	763 13 9
78-80, Bhoiwar Lane	....	Covered over with concrete and wire-gauze trapdoor at Municipal expense.	....

Situation of the well.	Area of the well.	Nature of requisition carried out.	Cost of work.
			Rs. a. p.
29, Pitha Street	....	Covered over with concrete and wire-gauze trapdoor at Municipal expense.	....
*27-29, Gola Lane	....	Do. do. .. (subsequently filled by party).	....
89, Esplanade Road	....	Filled up at Municipal agency at the whole cost of the party.	....
312, Princess Street	....	Hermetically covered over with concrete and party's handpump fixed at Municipal expense.	....
63, 1st Marine Street	....	Covered over with concrete and wire-gauze trapdoor at Municipal expense.	....
13, Benham Hall Lane	....	Do. do. ..	....
264, Girgaum Back Road	....	Do. do. ..	....
48, Ardeshir Dady Street..	....	Do. do. ..	....
54-56, Gola Lane	....	Hermetically covered over with concrete at Municipal expense.	....
16-17-18, Mugbhat Cross Lane	....	Hermetically covered over at parties' expense.	....
410 (5), Girgaum Road	....	Filled up at Municipal expense.. ..	....
11, 2nd Khaterali Lane	....	Covered over with concrete and wire-gauze trapdoor at Municipal expense.	....
22-26, Goga Street (2 wells)	....	Do. do ..	....
*27BC, Benham Hall Lane	....	Do. do. ..	....
*8-12, Goga Street	....	Do. do. ..	....
*13, Nanabhai Lane	....	Do. do. ..	....

* The party to pay half the cost of the work.

Situation of the well.	Nature of requisition carried out.
49, Popatwady	Filled up at Municipal expense.
15-21, 3rd Bhoiwada Lane ...	Covered over with concrete and wiregauze trapdoor at Municipal expense.
67-69, Charni Road	Hermetically covered over with concrete at Municipal expense and pump fixed at party's expense.
41, Trinity Street	Covered over with concrete and wiregauze trapdoor at Municipal expense.
*17-19-21-23, Modi Street ...	Do. do.
*116-120, Cawasji Patel Street...	Hermetically covered with concrete.
29, Ardeshir Dadi Street ...	Covered over with concrete and wiregauze trapdoor at Municipal expense.
32-34, Police Court Lane ...	Do. do.
*9-11, Nanabhai Lane	Do. do.
*46, Cawasji Patel Street ...	Do. do.
*13, Nanabhai Lane	Do. do.
6, 1st Marine Cross Lane ...	Filled up at Municipal expense.
5, 2nd Pinjrapole Street ...	Heremetical cover provided at half the cost and pump fixed at Municipal expense.
*526-534, Girgaum Road ...	Covered over with concrete and wiregauze trapdoor.
*2, Vanka Mohola	Do. do.

* Half the cost paid by the party.

Situation of the well.	Nature of requisition carried out.
*86, Cawasji Patel Street ...	Covered over with concrete and wiregauze trapdoor.
28-30-32-34, Cawasji Patel Street	Do. by Municipal agency at party's expense.
28, Ardeshir Dady Street ...	Concrete cover and wiregauze trapdoor provided at Municipal expense.
48, 2nd Carpenter Street ...	Hermetically covered over at Municipal expense.
*9, Borebhat lane	Covered over with concrete and wiregauze trapdoor.
*3-15, Parsi Panchayat Lane. ...	Do. do. do.
65, Cawasji Patel Street ...	Covered over with concrete and wiregauze trapdoor at Municipal expense.
303, Hornby Road	Do. do. do.
41—43, Goga Street	Do. do. do.

* Half the cost paid by the party.

15. The following further orders were passed by Government with reference to the utilisation of the Government grant of one lac of rupees :—

On a representation having been made by this Department the Municipal Commissioner in February 1914 asked the sanction of Government to authorise the use by the Municipality of their contribution in portions of D and E wards which are to the north of Grant Road, with a view to enable assistance being given where needed in all cases south of a line running along Clerk Road, DeLisle Road and Kalachowki Road. On this the following Resolution was passed by the Government :—

Malaria.

Request made by the Bombay Municipality for the utilisation of the Government grant towards filling or permanently covering dangerous wells north of Grant Road.

No. 1518.

General Department,
Bombay Castle, 26th February 1914.

Letter from the Municipal Commissioner for the City of Bombay, No. 34123, dated the 13th February 1914 :—

"I have the honour respectfully to invite the attention of Government to paragraph 13 of their Resolution No. 4125 of 6th July 1911, in which it is stated that Government are prepared to make a grant limited to one lac of rupees to cover the cost of filling or permanently covering dangerous wells south of Grant Road.

The operations of the Malaria campaign have now extended further north and action for closing wells is being taken in all parts of the Island. E Ward in particular is a locality where Malaria is rampant and poverty is a frequent excuse for non-compliance with the requisitions of the Special Department. Assistance from the Government grant is only given in case of religious and charitable institutions or where the plea of poverty is proved.

I have the honour therefore to request that Government will now be pleased to authorise the use by the Municipality of their contribution in portions of D and E Wards which are to the *North* of Grant Road. This will enable assistance to be given where needed in all cases south of a line running along Clerk Road, DeLisle Road, and Kalachowki Road."

Resolution.—The sanction asked for is accorded.

The Acting Municipal Commissioner was, under his No. 27997 of 22nd December 1914, pleased to issue the following order in connection with the distribution of Government grant :—

"I think where the cost is paid from the grant, we should insist on the well either being filled in or hermetically covered without a trapdoor. If people want trapdoors they must pay for the work themselves."

Subsequent to the passing of this order several cases cropped up in which the parties represented their poverty to carry out the work themselves and at the same time had valid religious objections put forth and in view of this the above order was modified and fresh orders issued by the Commissioner in August 1914 as under:—

"I agree with the Executive Health Officer in his first proposal that if Religious Objections were held valid and poverty is found to exist assistance may be given.

"With regard to the second point I agree that help may be given more liberally both to prevent hardship and to remove any soreness of feeling. Of course, the really well-to-do must still do their own work, but we may help both middle class and the really poor."

16. The following Municipal wells and tanks were filled in or covered:—

Locality where the well or tank is situated.	Whether well or tank.	Remarks.
Roadside at the junction of C. P. Street and Gunbow Street	Well ..	Hermetically covered with concrete.
Roadside near House No. 62, Bhoiwar Lane	Well ..	Hermetically covered with wooden cover.
Roadside near House No. 3-5, Nanabhai Lane	Well ..	Do. do.
Roadside near House No. 215-17, Mody Street	Well ..	Do. do.
Roadside on footpath, Cruikshank Road	Well ..	Do. do. with concrete.
North of Police Court do.	Well ..	Do. do. do.
East of Police Court do.	Well ..	Filled in.
Esplanade Road near No. 10, West of Bombay Gymkhana.	Well ..	Hermetically covered with wooden cover.
Hospital Lane, opposite Native Detail Line	Well ..	Do. do.
Guncarriage Street near Dispensary	Well ..	Do. do.
9, 1st Pophalwady, Bhuleshwar	Well ..	Do. do. planks.
135, Cavel Street	Well ..	Filled in.
145, Cavel Street	Well ..	Do.
Near No. 70, Cavel Street	Well ..	Do.
Cowasji Patel Tank, Bhuleshwar	Tank ..	Do.
Dhobi Talao Tank	Tank ..	Do.
Near the boundary of filled up Gowalia Tank	Well ..	Do.
Junction of Kandewady Lane and Khaterali	Well ..	Hermetically covered.
Girgam Back Road opposite Angre's Wadi	Well ..	Filled in.
Junction of 2nd Parsiwada and Girgam Back Road opposite Maharbowri Police Chowki.	Well ..	Do.
Gowalia Tank Road	Tank ..	Do.
56, Matharpakhady Road	Well ..	Covered.
1, Gangabowdi Road	Well ..	Do.
1-3, Nanabhoy Tank in Tank Road	Tank ..	Filled in.

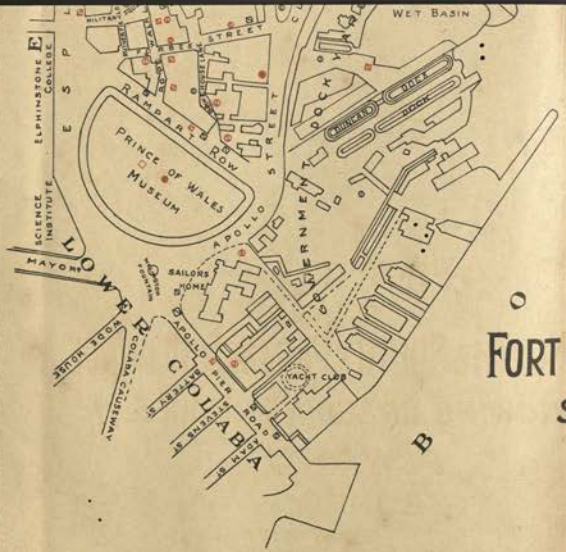
17. Spot maps of each section are maintained in this office showing the permanent breeding places, and I attach herewith a copy of Fort North and South section and part of Esplanade showing the wells protected and the position of the European General Hospital.

Legal aspect of Mosquito Prevention.

18. The amended section 381 of the Act was put in force during this year and action was started for breeding places other than wells, *viz.*, cisterns, fountains, masonry tanks, flower vases, casks, &c., &c.

19. All cisterns in Government buildings all over the City have been protected and action for protecting those in private buildings is proceeding. During the year 2,428 cisterns in private buildings were protected.

MARKET
CHAKLA
CARNAC ROAD
CARNAC OVER BRIDGE
IMPROVEMENT TRUST
BIGGARIE SHEDS
CRAWFORD MARKET
A & B WARD MUNICIPAL STABLES
MUNICIPAL WORKSHOPS
CENTRAL POLICE STATION
ST. ZAVIER'S SCHOOL
NAKHODAS TANK
ELPHINSTONE HIGH SCHOOL
CAMA HOSPITAL
INDO BRITISH INSTITUTION
ISLAM SCHOOL
POLICE COURTS
TIMES OF INDIA PRESS
MUNICIPAL OFFICE
GENERAL PARADE GROUND
VICTORIA TERMINUS
G.I.P. RAILWAY
VICTORIA TERMINUS
EUROPEAN GENERAL HOSPITAL
B.R.&C.L. RAILWAY GOODS STATION
CARNAC BASIN
9.62 ACRES
MODY BUNDER
ALEXANDRA DOCK
ALIBAG
GENERAL POST OFFICE
GOA STREET
CARWAR STREET
KOMPTA STREET
MANGALORE STREET
KALICAT STREET
BIGGARIES CHAWL & NIGHT SOIL DEPOT
ROCKIN STREET
BALLARD ROAD
BALLARD PIER
BOMBAY MINT
TANK
GENERAL ARSENAL
CUSTOM HOUSE
TOWN HALL
CHURCH GATE STREET
ESPLANADE ROAD
RAVALIN ST
OUTRAM ROAD
NAPIER ROAD
ORIENTAL BUILDING
HORNBY ROAD
ELPHINSTON CIRCLE
LAND TO BE RECLAIMED BY DEPOSIT OR MATERIAL EXCAVATED FROM DOCK & CHANNEL
TO BE DEEPENED TO 4000
TO BE DEEPENED TO 4800 THD
SOUTH CHANNEL BEING DEEPENED



SPOT MAP
OF
FORT NORTH & SOUTH & PART OF ESPLANADE
SHOWING BREEDING PLACES.

A. WARD

BOMBAY.

Scale 400 feet to an Inch.

Red indicates Anopheles.

Black indicates Culex and Stegomyia.

- ○ *Wells breeding Larvæ.*
- ● *Wells filled in.*
- ◐ *Wells covered.*
- □ *Cisterns breeding larvæ.*
- ⊡ *Cisterns covered.*

Shri Karunesh P. Press Bombay No4

20. During the last 3 years, 1,831 samples of well water were analysed by the Municipal Analyst and out of these only 204 were declared fit for potable purposes, giving a percentage of 11·14 as fit. The following Table shows the result in detail :—

—	1912.	1913.	1914.	Total.
Fit for potable purposes	79	85	40	204
Unfit for potable purposes	389	701	164	1,254
Objectionable or Suspicious	86	117	60	263
Fair	11	59	28	98
No opinion can be given	5	7	.....	12
	570	969	292	1,831

21. Trap-door concessions are given in all cases where religious objections are urged, irrespective of the potability of the water and the situation and sanitary condition of the well. In order, however, to guard the public against its indiscriminate use, the Health Officer's suggestion to place a notice on such wells was approved by the Municipal Commissioner and 1,000 Notice Boards containing the following notice in Guzerati are being ordered out :—

"આએ કુવાના પાણીનો પીવામાં ઉપયોગ કરવાથી તંદરોસ્તીને નુકસાનકારક છે."

The fixing of the notice and its continuance will be made a condition of the trap-door being permitted to remain.

22. These trap-doors are invariably left open and warning letters have to be addressed to the owners. During the year under report 283 letters were addressed to parties to keep the trap-doors constantly closed under lock and key, out of which 40 were sent under the Municipal Commissioner's signature.

23. Mr. M. H. Muckba, owner of a tank in premises No. 900-902, Parel Road, 2nd Nagpada, was convicted by the 2nd Presidency Magistrate and fined Rs. 30 for not covering his tank. He appealed to the High Court and the case was decided against him, their Lordships declining to interfere with the Magistrate's order of fine. The tank was subsequently hermetically covered with a hand-pump fixed.

24. Two lectures on Malaria were delivered at the following places :—

(1) To the students of the Sanitary Surveyors' Class.

(2) To the members of the Instituto Luso Indiano under the presidentship of the *vice* Consul of Italy.

25. The weekly reports of places breeding larvæ were published as before free of charge by the local papers and our thanks are due to the proprietors especially The *Times of India* for publishing a full list.

26. The contract for supply of Khajura and Piku fish expired in October 1914 and the same was not renewed as there was not much demand for fish, the contractor agreeing to supply fish when demanded at the present rates.

27. *Quinine Distribution.*—Tabloids of Quinine Hydrochloride (by B. W. & Co.) were distributed free as before, to Charitable Institutions, by house-to-house visits in Mala-

rious localities and by the District Registrars and the following Table shows where the Tabloids were distributed :—

To whom.	Gr. ii.	Gr. iv.
The Hon. Secretary, Indo-British Institution	500	...
The Lady Superintendent, Mahomedan Female Orphanage	2,000	...
The Principal, Sir J. J. P. B. Institution (Boys')...	...	1,750
The Superintendent, Sir J. J. P. B. Girls' School	1,000	875
The Superintendent, Lady Northcote Hindoo Orphanage	1,000	3,500
Private parties and lower staff	850	464
Malaria Inspector, A for distribution amongst poor	1,000	825
" B " "	...	100
" D " "	100	100
The Deputy Health Officer, B Ward	300	...
The Conservancy Inspector, D "	...	100
The Conservancy Inspector, B "	300	...
The District Registrar, No. 1 District	...	1,712
Do. do. " 2 "	500	...
Do. do. " 3 "	...	2,625
Do. do. " 4 "	...	2,625
Do. do. " 5 "	...	875
Do. do. " 6 "	...	2,625
Do. do. " 7 "	...	1,625
Do. do. " 9 "	500	875
Do. do. " 10 "	...	1,750
	8,050	22,426

28. *Spleen Examination.*—House to House inspection of children for enlarged spleen was continued during the year. The following Table shows the result of Spleen Census by Wards and Sections :—

Section.		Total No. examined.	No. with enlarged spleen.	Percentage by sections.	Percentage by Wards.
A	Colaba ...	430	39	9·06	12·32
	Fort South	20	4	20·00	
	Fort North	1,337	159	11·89	
	Esplanade	249	49	19·67	
		2,036	251	12·32	
B	Mandvi ...	469	28	5·97	6·31
	Chukla ...	25	...	0·00	
	Umarkhadi	453	23	5·07	
	Dongri ...	689	45	6·53	
	Market ...	596	45	7·55	
		2,232	141	6·31	
C	Dhobi Talao	702	62	8·83	5·50
	Fanaswadi	236	9	3·81	
	Bhuleshwar	284	10	2·52	
	Kumbharwada ...	501	20	3·99	
	Khara Talao	476	20	4·20	
		2,199	121	5·50	
D	Chaupati	115	23	20·00	5·77
	Khetwady	803	30	3·73	
		918	53	5·77	
E	Tarwadi	688	33	4·79	4·56
	Byculla ...	1,311	64	4·88	
	2nd Nagpada	134	6	4·47	
	1st Nagpada	146	2	1·36	
	Tardeo ...	125	5	4·00	
	Mahalakshmi	72	3	4·16	
		2,476	113	4·56	
F	Parel	437	20	4·57	4·11
	Sion	49	...	0·00	
		486	20	4·11	
	Total ...	10,347	699	6·75	6·75

29. From this it will be seen that Fort North, Esplanade, Chowpatty and Fort South Sections show high percentage. As regards Fort South, the number examined is very small, as this Section is mostly occupied by offices.

Chowpaty included the examination of City Improvement Trust temporary sheds and Permanand's chawls. Here the high percentage is due to outsiders from infected villages coming and occupying these chawls.

There thus remain Esplanade and Fort North, showing respectively a percentage of 19·67 and 11·89.

30. The spleen rate in these Sections in the previous years was as follows:—

Sections.	1909.	1910.	1912.	1913.	1914.
Fort, North	49·44	.....	40·48	15·27	11·89
Esplanade	73·38	48·4	27·37	15·63	19·67

It will be seen from the above Table that Fort North, shows still greater improvement over the figures of the last and previous years, whereas Esplanade Section shows a little higher figure than last year. This is due to the changing population in the poor class chawls, including Bigaries' chawls, to the east of Frere Road and in the City Improvement Trust temporary sheds near the Carnac Bridge, where children with enlarged spleen come from infected districts. In the C. I. T. chawls there were 14 enlarged spleens out of 94 examined and in the Palton Road Health Department chawls there were 16 out of 62 examined.

31. The following Table shows the spleen rates by Wards for the last 4 years:—

Ward.	1910.	1912.	1913.	1914.
A	29·9	33·50	15·87	12·32
B	13·0	15·03	3·18	6·31
C	5·9	9·99	4·89	5·50
D	2·7	3·99	3·41	5·77
E	1·8	11·40	4·96	4·56

Thus A ward shows gradual reduction in the spleen rate during the last 3 years.

32. The spleen rate for the whole City was 6·75 against 5·87 during the preceding year.

33. The following Table shows spleen rates by Castes:—

—	No. of children examined.	No. with enlarged spleen.	Percentage.
Hindus	6,971	460	6·59
Mahomedans	1,757	95	5·40
Parsees	1,057	101	9·55
Christians	354	30	8·47
Jews	205	13	6·34
Chinese	3	...	...

34. The Parsee spleen rate was almost the same as the last year.

35. The following Table shows spleen rate by Castes for the last 4 years :—

	1910.	1912.	1913.	1914.
Hindus	16·5	10·55	4·71	6·59
Mahomedans	20·5	4·88	5·75	5·40
Parsees	24·7	19·96	9·15	9·55
Christians	13·3	8·26	9·97	8·47
Jews	...	6·96	6·47	6·34

All these rates are below 10 per cent.

In the case of a healthy area, the average spleen rate amongst children is not above 10 per cent.; a moderately endemic area, it is between 10 and 25 per cent.; a highly endemic area, it is between 25 and 50 per cent.; and a hyper-endemic area, it is above 50 per cent.

36. *Medical Inspection of Parsee School Children.*—Dr. K. K. Dadachanjee, Medical Secretary to the Zoroastrian Conference, has successfully carried out a scheme of medical inspection of Parsee children attending Schools. In all 12 schools in the City were examined by different Parsee Medical Practitioners and out of 1946, children so examined, enlarged spleen was found in 273 cases, giving a percentage of 14·02. This percentage is higher by 4·47 over the figures arrived at by this office. This is due to the large number of children examined including those residing outside the City of Bombay and attending the different schools.

37. The District Registrars examined the children attending their dispensaries for spleen and the following Table gives results of those enquiries by Wards :—

Ward.	No. of children examined.	No. with enlarged spleen.	Percentage.
A	63	24	38·09
B	5,003	518	10·35
C	3,615	662	18 31
D	3,875	20	·51
E	1,981	548	27·66
F	828	33	3·98
G	1,610	83	5·15
Total ...	16,975	1,888	11·12

38. The following Table shows by Races the result of the spleen census taken by the District Registrars :—

Castes.	No. examined.	No. with enlarged spleen.	Percentage.
Hindus	10,056	86	·85
Mahomedans	4,490	752	16·74
Christians	1,104	112	10·14
Parsees	717	116	16·17
Jews	608	108	17·76
Total ...	16,975	1,888	11·12

39. Dr. Sir T. B. Nariman has kindly supplied us with the following spleen rates of the females attending the Parsee Lying-in-Hospital:—

1910.	10	per cent.
1913.	1·84	„
1914.	2·96	„

40. The Joint Schools Committee of the Bombay Municipality recently appointed three medical practitioners to make medical inspection of all children attending the Municipal schools.

In all 8,714 children were examined during the last year and out of these 254 had enlarged spleens giving a percentage of 2·91.

41. The following Table shows the spleen rate by Castes as taken by these medical practitioners:—

Castes.	No. examined.	No. with enlarged spleen.	Percentage.
Hindus	7,579	213	2·82
Mahomedans	866	25	2·88
Parsees	219	9	4·11
Christians	11	2	18·18
Jews	39	5	12·82
Total ...	8,714	254	2·91

42. This Return shows a very low spleen rate amongst the 3 principal Indian communities, *viz.*, Hindus, Mahomedans and Parsees.

43. *Random Sampling*:—Random sampling was continued during the year under report. The parasite rate by Wards and Sections was as under:—

Sections.	Month.	No. of specimens examined.	No. in which parasites found.	Percentage by Sections.	Percentage by Wards.	Remarks.
A Esplanade	May.	111	4	3·60	2·51	
A Colaba	May & June.	52	...	0·00		
A Fort North	July.	76	2	2·63		
		239	6			
B Dongri	October.	70	1	1·42	1·42	
C Dhobi Talao	Febry. & September.	143	1	·69	1·38	
C Fanaswadi	March.	73	2	2·73		
		216	3			
D Khetwadi	April & August.	148	3	2·02	1·86	
D Chowpati	November.	67	1	1·49		
		215	4			
E Mazagon	January.	63	...	0·00	1·58	
E Tarwadi	August.	44	1	2·27		
E Byculla...	March & November.	145	3	2·06		
		252	4			
Total ...		992	18		1·81	

44. The District Registrars sent 215 specimens of blood slides of patients suffering from Fever and the following Table shows the results by Districts:—

District No.	No. of slides sent.	No. in which parasites found.	Percentage.
1	60	11	18·33
3	1	...	0·00
4	8	2	25·00
5	136	7	5·14
6	4	...	0·00
7	2	...	0·00
10	4	...	0·00
Total ...	215	20	9·30

45. The following Table shows the mortality from Malaria by Wards:—

Ward.	1908.	1909.	1910.	1911.	1912.	1913.	1914.
A	77	72	80	81	91	65	51
B	133	71	78	112	101	47	25
C	41	45	50	52	58	53	42
D	38	20	29	23	22	24	22
E	35	51	37	39	56	47	45
F	5	11	9	9	22	10	11
G	6	6	1	10	7	11	9
Harbour	6	17	9	8	3	4	8
Total ...	341	293	293	334	360	261	213

46. The result of the spleen and parasite rates of the temporary C. I. T. chawls near Carnac and Palton Roads was as follows:—

	1909.	1912.	1913.	1914.
Spleen rate	56	36·00	18·01	14·89
Parasite rate	40	19·17	3·12	4·44

47. The following Table shows at a glance by Wards the spleen and parasite rates and Malarial mortality for the last four years:—

—	Spleen Rate.				Parasite Rate.				Mortality from Malaria.			
	1910.	1912.	1913.	1914.	1910.	1912.	1913.	1914.	1910.	1912.	1913.	1914.
A	29·9	33·50	15·87	12·32	34·8	10·54	2·98	2·51	80	91	65	51
B	13·0	15·03	3·18	6·31	13·1	3·01	2·89	1·42	78	101	47	25
C	5·9	9·99	4·89	5·50	34·5	14·14	1·88	1·38	50	58	53	42
D	2·7	3·90	3·41	5·77	3·8	0·00	0·00	1·86	29	22	24	22
E	1·8	11·40	4·96	4·56	3·8	7·97	5·45	1·58	37	56	47	45

48. 1,204 specimens of Anopheles larvæ were examined in this office and tabulated as under :—

A. stephensi	177
A. rossi	990
A. jamesi	4
A. barbirostris	29
A. culcifacies	4
	1,204

All these, as well as 624 samples of Culex and Stegomyia larvæ were sent to the Director, Bombay Bacteriological Laboratory, for his information.

49. The following Statement shows the present condition of Municipal wells and tanks in the different Wards of the City:—

Ward.	Locality where the well or tank is situated.	Whether well or tank.	Present condition.
A	Roadside at the junction of Cawasji Patel Street and Gunbow Street.	Well ..	Hermetically covered with concrete.
	Roadside near house No. 62, Bhoiwar Lane	Do. ..	Hermetically covered with wooden cover.
	Roadside near house No. 3-5, Nanabhai Lane	Do. ..	Do. do.
	66, Gunbow Street	Do. ..	Uncovered. Not breeding.
	Roadside near house No. 22-AA, Mint Road	Do ..	Open. Under fish trial.
	Roadside near house No. 150-54, Fort Street	Do. ..	
	Roadside near house No. 215-17, Mody Street	Do. ..	Hermetically covered with wooden cover.
	Esplanade Maidan	4 Wells ..	Steps are being taken to cover them.
	Roadside on footpath, Cruickshank Road	Well ..	Hermetically covered with concrete.
	North of Police Court, Cruickshank Road	Do. ..	Do. do.
	East of Police Court, Cruickshank Road	Do. ..	Filled in.
	Esplanade Road near No. 10, West of Bombay Gymkhana.	Do. ..	Hermetically covered with wooden cover.
	Esplanade Road, West of Bombay Gymkhana	Do. ..	Open. Under fish trial.
	Hospital Lane, opposite Native Detail Line	Do. ..	Hermetically covered with wooden cover.
	Guncarriage Street near Dispensary	Do. ..	Do. do.
	Guncarriage Street opposite Municipal Stable	Do. ..	Open. Not breeding.
	Carnac Road behind St. Xavier's College, Nakhoda Tank.	Tank ..	Open. Proposed to be covered.
B	Nil.	Nil. ..	Nil.
C	9, 1st Pophalwady, Bhuleshwar	Well ..	Hermetically covered with wooden planks.
	3, Punchayat Lane, Bhuleshwar	Do. ..	Under fish trial.
	17-18, Cavel Street	Do. ..	Do.
	37, 3rd Marine Street between houses Nos. 35 and 39 ..	Do. ..	Improperly covered with wooden planks.
	135, Cavel Street	Do. ..	Filled in.
	145, Do.	Do. ..	Do.
	Near No. 70, Cavel Street	Do. ..	Do.
	Cawasji Patel Tank, Bhuleshwar	Tank ..	Do.

Ward.	Locality where the well or tank is situated.	Whether well or tank.	Present condition.
C	Dhobi Talao Tank	Tank. ..	Filled in.
D	Near the boundary of filled up Gowalia Tank	Well ..	Do.
	Junction of Kandewady Lane and Khaterali	Do. ..	Hermetically covered.
	Girgaum Back Road opposite Angre's Wadi	Do. ..	Filled in.
	Junction of 2nd Parsiwada and Girgaum Back Road opposite Maharbowri Police Chowky.	Do. ..	Do.
	Gowalia Tank Road	Tank ..	Do.
E	56, Matharpakhady Road	Well ..	Covered.
	1, Gangabowdi Road	Do. ..	Do.
	4, Dockyard Road	Do. ..	Open. Proposed to be covered.
	63, Coppersmith Oart	Do. ..	Open. Recommended to be covered.
	1-3, Nanabhoy Tank in Tank Road	Tank ..	Filled in.
	9, Nawab's Tank Road, Nawab's Tank	Do. ..	Being filled in.
	Mustan Tank Road Cross Lane	Do. ..	Do.
F	Parel Village	Well ..	Under action.
	Parel Vaccine Depot..	Do. ..	Under fish trial.
	Vincent Road, Naigaum Tank	Tank ..	Being filled in.
	Matunga Road	2 Tanks ..	Open. Pesterined.
G	On the west side of road leading from the Breach Villard to Worli in Norra Parra near the sluices.	Well ..	Action not yet taken in this ward.
	Mahim Woods in the Degbee Tank	Do. ..	
	North of Worli Koliwada	Do. ..	
	East side of road leading from Breach Villard to Worli 2nd Pakady.	Do. ..	
	Worli Hill opposite to Sambhoo Mahadeo's Pagoda ..	Do. ..	
	East of Lady Jamsetji Road	Tank ..	
	East of road leading from Mahim to Worli	Do. ..	
	North of Worli Koliwada	Do. ..	
	East side of Dadar Road 400 yards away	Do. ..	
	North of Worli Koliwada	4 Tanks ..	
	East of road leading from Breach Villard to Worli ..	Tank ..	

It will be seen from the above that of the 19 tanks, 12 are open including 9 in G Ward, 4 have been filled in and 3 are being filled in. Of the 41 wells, 13 have been covered over, 7 filled in, and 21 are open out of which 6 are under fish trial. No action has at present been taken in regard to the wells and tanks in G Ward.

50. *The bilge water in native crafts in the Harbour.*—The following report was submitted to the Municipal Commissioner :—

" It is necessary to know definitely the position of the Executive Health Officer of the City and Health Officer of the Port.

One of the duties of the Health Officer of the Port is to deal with infectious diseases amongst the shipping.

Malaria must be considered an infectious disease and mosquitoes are the vehicles which convey it and other diseases. Whether the mosquito is malaria bearing or a culex or stegomyia it is a potential danger in the same way as infected clothing of Typhoid, Small-pox or Measles as the infected material of carrier is on a ship in the harbour, and for this purpose country craft may be called a ship and it is the duty of the Health Officer of the Port to control it."

The question is still under consideration.

51. *Road-watering cisterns.*—Estimates are being prepared for the work of converting the present chain attachment to the outlet valves of the roadwatering tanks into a mosquitoproof road stuffing box attachment.

52. *E. G. Hospital.*—A report was submitted in connection with the enquiry regarding the prevalence of Malaria in the St. George's Hospital and the following Resolution was issued by Government on the subject:—

This report speaks for itself.

St. George's Hospital, Bombay.—

Report of the Committee appointed to investigate into the causes of Malaria in the compound of the—

No. 9873.

General Department,
BOMBAY CASTLE, *5th December* 1914.

Letter from the Surgeon General with the Government of Bombay, No. C. 1576, dated the 27th August 1914:—

"With reference to Government Resolution, General Department, No. 3171, dated 23rd April 1914, I have the honour to submit the accompanying report of the Committee appointed to enquire into the prevalence of Malaria in the compound of the St. George's Hospital."

ORDER.—Government have read with interest the report of the Committee appointed to enquire into the prevalence of Malaria in St. George's Hospital and its precincts. They note with satisfaction the marked diminution in the incidence of Malaria in the neighbourhood of the Hospital which has been recently effected by the energetic measures of the Health Department of the Municipality, and they trust that the campaign which has already been productive of such encouraging results will continue to be prosecuted with undiminished vigour.

2. The suggestion made by the Committee that, as an experimental measure, a small section of the Hospital should be made mosquito-proof by providing wire-gauze doors and windows is approved. The work should be taken in hand at once. The cost, which is estimated at Rs. 3,727, should be met by a transfer of funds from the lump provision of Rs. 21 lakhs made in the current year's budget on account of grants-in-aid to local bodies for sanitary projects.

3. The thanks of Government should be conveyed to the members of the Committee for their labours in connexion with this investigation.

4. This order should be placed on the Editors' Table, Bombay, and published in the supplement to the Bombay Government Gazette.

Accompaniment to Government Order, General Department, No. 9873, *dated the 5th December* 1914.

Report of the Committee appointed to enquire into the prevalence of Malaria in the St. George's Hospital, Bombay.

At the meeting of the Legislative Council held on 18th March 1914, it was resolved that a Committee should be appointed to enquire into the prevalence of Malaria in the compound of St. George's Hospital, and to recommend measures to be adopted, whether by rendering the buildings mosquito-proof or otherwise whereby the possibility of the contraction of Malaria in the Hospital may be eliminated or materially reduced.

2. The following Committee was appointed (Government Resolution, General Department, No. 3171, dated 23rd April 1914):—

President.

The Honourable Surgeon General R. W. S. Lyons, M.D., I.M.S.

Members.

The Surgeon Superintendent, St. George's Hospital.
Major W. G. Liston, C.I.E., M.D., D.P.H., I.M.S.
The Director, Bombay Bacteriological Laboratory.
The Executive Health Officer, Bombay Municipality.
The Executive Engineer, Presidency.
Mr. J. P. Chrystal.

Mr. Chrystal was unable to attend, and Mr. Savile took his place on the Committee.

3. The Committee decided that their report should deal with the matter under the following heads:—

I. The extent to which Malaria exists in the Hospital and compound and in the surrounding neighbourhood, comparing the present condition with that which was found some years ago.

II. The measures which have been adopted up to the present with the object of reducing Malaria in the Hospital and its immediate neighbourhood by the administration of quinine, by reducing the number of breeding places of anopheles mosquitoes, especially A. stephensi, and by protecting the patients and staff from the bites of mosquitoes.

III. The additional measures which can be adopted with the object of still further reducing the prevalence of Malaria in the Hospital and its neighbourhood.

Section I.

The extent to which Malaria exists in the Hospital and compound and in the surrounding neighbourhood, comparing the present condition with that which was found some years ago.

4. The extent to which Malaria exists in any locality can conveniently be gauged by the examination of Hospital statistics, by examining the blood of persons living in the district for Malaria parasites; and by examining the children in the district with the object of finding out how many of them suffer from enlarged spleens, the result of Malaria infection.

5. Each of these methods has its own respective advantages and disadvantages.

6. We propose to consider, in the first place, the measurement of Malaria by an examination of Hospital statistics. This method appears at first sight to be the most direct and accurate measure of the extent to which Malaria prevails in a locality. But it is well known that all cases returned may not be fresh infections, some are recrudescences or relapses of previous infections acquired either in or outside the locality where the attack occurs. This fallacy is likely to be more in evidence when the cases recorded occur among persons whose vitality has been lowered by other diseases, so that the number of cases which are reported among patients in Hospital is not a trustworthy measure of the extent to which the disease prevails in the Hospital or its neighbourhood. The number of cases which occur among nurses is also likely to give a false impression of the extent to which Malaria prevails, for, owing to the exacting nature of their work, nurses are liable to recurring attacks of Malaria and also because their duties at night expose them to greater risk of infection than patients who are protected by mosquito curtains. Bearing these fallacies in mind, we would draw attention to the following Table which shows the number of patients and nurses who were resident in the Hospital at the time they developed Malaria. Although these patients and nurses developed Malaria in the Hospital during the year 1913 there is no definite proof that infection was contracted while actually resident in the Hospital:—

Months.	No. of Patients.	Patients attacked in Hospital.	Strength of Nurses.	Nurses attacked in Hospital.
January	108	6	59	Nil.
February	99	2	57	3
March	100	4	58	5
April	154	6	60	1
May	152	1	60	5
June	152	4	62	2
July	206	8	64	8
August	195	6	67	6
September	228	12	67	5
October	262	10	68	7
November	218	11	68	8
December	189	1	67	9
Total ...	2,063	71	757	59
Average per month ...	172	6	63	5

The Table shows that during the whole year 71 attacks of Malaria were recorded among the patients and 59 among nurses. The average number of beds occupied by patients during each month throughout the year was approximately 172, and the average number of Malaria attacks among these patients was 6 each month. It will be observed, however, that nearly three times as many cases occurred during the latter half as compared with the first half of the year, for mosquitoes and Malaria are more prevalent during and immediately after the rainy season.

7. The second method of measuring the extent of Malaria is by examining the blood of persons living in a locality for Malaria parasites. This method is subject to considerable fallacy on account of the liability to include among the persons examined, those who are suffering from fever, while infected persons who are fever-free are not included. This method is a difficult one, requiring a considerable amount of skill and patience in making the examination. Certain figures have been supplied to us by the Health Officer, which show that in 1910 of 2,681 slides made from the blood of persons living in A Ward, 943 contained Malaria parasites, giving a parasite rate of 34·8 per cent. In 1912, 275 slides made from persons living in A Ward showed 29 with parasites or 10·54 per cent. In 1913, 469 slides made from persons living in A Ward showed parasites in 14 or 2·98 per cent.

8. A more accurate method of ascertaining the amount of Malaria in a locality is to examine the children living there with the object of observing to what extent enlargement of the spleen is present among them. Young children are selected because they do not migrate from one place to another to the same extent as adults do, and, moreover, adults continuously living in a malarious locality become partially immune to the disease.

9. This method of measuring Malaria, *i.e.*, noting the percentage of children with enlarged spleens giving a figure called the splenic index, has the advantage that one locality can be readily compared with another and changes which may take place in the healthiness of the locality from year to year can be recorded. A locality which has a splenic index below 10 may be regarded as fairly healthy, an area with a moderate amount of Malaria generally has a splenic index between 10 and 25, a highly malarious locality will have a splenic index between 25 and 50 and a hyper-endemic area is one with a splenic index over 50.

10. In 1910, a very careful spleen census of Bombay was made by Dr. Bentley, who examined more than 52,000 children and found that for the whole island of Bombay the splenic index was 7·2. The extent to which the disease prevailed in the different parts of the island varied greatly however, as is shown in the following Table extracted from his report:—

Ward.	Number of Children examined.	Number of Children with enlarged. spleens.	Percentage With enlarged spleens.
A	5,944	1,783	29·9
B	5,980	781	13·0
C	1,225	711	5·9
D	7,532	208	2·7
E	11,646	213	1·8
F	5,513	66	1·1
G	3,896	41	1·0
Total	52,536	3,803	7·2

11. This Table shows that in 1910, A Ward was a highly malarious locality, having a splenic index of 29·9. The distribution of malaria in this Ward, which comprises the whole of the Island south of Carnac Road, varied considerably. The splenic index was as high as 42·3 in the Esplanade Section in which the European General Hospital is situated, and 33 in Fort North, the Section adjacent to the Hospital, and as low as 7·7 in Upper Colaba where the European troops are stationed. Judging by this method of measuring the extent of Malaria there can be little doubt that in 1910 the area in which the European General Hospital is situated was a very malarious one. It will be seen, however, by what follows, that since that date very considerable improvement in the health of the locality has been effected by the extensive and elaborate anti-malaria operations of the Health Department of the City.

12. In 1912, two years after Dr. Bentley's census, a splenic census was made by the Health Department which gave the following figures:—

In the whole of A Ward, 1,167 children were examined, 391 of these had enlarged spleens, giving a splenic index of 33·5. In the Fort North Section of this Ward the index was 40·48 and in the Esplanade Section it was 27·37.

13. A census, made in 1913, showed that among 3,019 children in the whole of A Ward, 458 had enlarged spleens, giving an index of 15·87. In the Fort North Section in that year 2,730 children were examined and 417 had enlarged spleens, giving an index of 15·27. In the Esplanade Section, 243 children were examined; 83 of these had enlarged spleens so that the splenic index in this Section in 1913 was 15·63.

14. In 1914, 501 children were examined by the Health Department in the Fort North Section of the Ward. Sixty-nine of these had enlarged spleens, so that the index in this section now is 13·77. The figure for 1914, however, has been obtained during the first half of the year when Malaria is less prevalent, so that a lower figure than that for the whole year is obtained.

15. A spleen census of the children (chiefly the children of the menial staff) resident in the Hospital compound was made by Colonel Jackson during the hot weather of 1914. This census showed that of 74 children examined, 20 had enlarged spleens, so that the splenic index was as high as 27 in the Hospital compound.

16. The Health Officer has supplied us with figures which have been compiled from the examinations made of the children living in the City Improvement Trust chawls in Palton Road, in the Esplanade District adjacent to the Hospital. These figures bring out clearly the improvement in the health of this neighbourhood which has been effected in recent years owing to the energetic anti-malaria operations of the Health Department:—

Year.	Spleen rate.	Parasite rate.
1909	56·0	40·0
1912	36·0	19·17
1913	18·01	3·12
1914	14·89	4·44

In comparing the figures in the different years it should be remembered that those collected in 1914 were obtained during the fair season when Malaria is less prevalent.

17. In concluding this section of our report we believe that the most reliable measure of the extent to which Malaria exists and has existed in the Hospital and its neighbourhood can be obtained from the figures which have been compiled at different times by various persons and which show the splenic index in the different Wards and Sections. A study of these figures proves that in former years A Ward was very malarious, but that of recent years there has been a very great reduction in the amount of Malaria in this Ward, especially in that Section of it in which the Hospital is situated.

Section II.

The measures which have been adopted upto the present with the object of reducing Malaria in the Hospital and its immediate neighbourhood by the administration of quinine, by reducing the number of possible breeding places for Anopheles stephensi and by protecting patients and staff from the bites of mosquitoes.

18. The Committee learn that all children during their residence in the Hospital as well as many adult patients receive prophylactic (preventive) doses of quinine; all the nurses receive tri-weekly prophylactic doses of quinine and the menial staff and their families are treated prophylactically by quinine daily.

19. The general prophylactic administration of quinine although at one time attempted by the Municipal Health Department in the Fort North and Esplanade Sections of A Ward had ultimately to be restricted to such persons as were willing to carry it out. The Officers of the Health Department, however, continued to encourage the use of quinine by facilitating the sale of "quinine treatments" and by providing quinine free to the poor.

20. The Hospital compound has been carefully examined and all mosquito-breeding grounds have been dealt with as far as practicable. Thus the eaves gutters have been removed and closed tanks have been adopted for use in the garden instead of open "houds." The Dhobi Ghat has been drained. Sullage pipe openings have been covered with wiregauze and pesterine is applied to all drain catch-pits, and similar collections of water at least once a week. Overflow pipes from cisterns have been covered with wiregauze and all empty cisterns, tins, etc., lying in the compound have been removed. The buffalo stables in the compound are now no longer used. Hollows in the ground which were likely to collect water in the monsoon have been filled in.

21. In the neighbourhood of the Hospital there are 574 wells within a radius of half a mile. Of these, 421 have been closed or covered and 91 are under action with a view to being protected. There remain 62 wells, of which 38 have not been proved to be breeding places of anopheles, while 24 have been stocked with fish to

prevent the breeding of mosquitoes. This does not include the Mint tank about which a reference has been made to Government. This tank has also been stocked with fish. The open cisterns in the G. I. P. Railway compound and the cisterns of the Post Office have been covered and rendered mosquito-proof. Cisterns in private houses are also being dealt with by the Municipality with a view to making them mosquito-proof. Thus out of 1,261 cisterns in private houses, 816 still remain to be dealt with.

22. The New Port Trust Dock, which before it was filled with sea water, was a fruitful breeding place for Anopheles stephensi, has recently been taken into use. On the Port Trust property, 16 cisterns have been covered and all collections of storm water and the water in the fire buckets are treated with pesterine by a special staff employed for the purpose who visit all parts of the area in charge of the Port Trust in rotation. In the Hospital all beds are provided with mosquito curtains and mosquito-proof cubicles have been provided for the use of the nurses on night duty.

23. In summarising this section of our report we desire to point out that the elaborate and extensive anti-malarial measures which have been enumerated above show clearly that the Superintendent of the Hospital and the Health Department of the Municipality are fully alive to their responsibilities in preserving the health of the patients in the Hospital and of the people living in the neighbourhood. There can be little doubt that the anti-malarial measures which have been enforced have been largely responsible for the improvement in the health of the neighbourhood on which we commented in the previous section of our report. We desire, however, to draw attention to the fact that although many of the measures enumerated have been enforced or effected for some time, others have been adopted more recently so that it is probable that with the further extension and development of the operations the prevalence of Malaria in A Ward will be reduced still further. It is necessary, however, to point out that the success of the campaign against Malaria will depend greatly on the continuance of the work which is at present so energetically pursued by the Health Department. We would urge therefore that they should be encouraged to press forward all works which will be of permanent utility in the prevention of Malaria, especially the covering of wells and cisterns in the infected areas. Unfortunately there still remain a certain number of breeding places for Anopheles stephensi over which the Municipal authorities can have little control, *viz.*, collections of water stored intentionally or unintentionally in the houses of the inhabitants of the neighbourhood. Every effort therefore should be made to enlist the sympathy and support of the people themselves in the fight against Malaria. They should particularly be encouraged to thoroughly treat all cases of Malaria with quinine, for it is evident from the number of children, who are still found in the neighbourhood suffering from enlarged spleens, that many cases of Malaria are ineffectively treated, and the danger of these cases lies in the fact that they are the source from which mosquitoes acquire their infective power.

Section III.

The additional measures which can be adopted with the object of still further reducing the prevalence of Malaria in the Hospital and its neighbourhood.

24. It is obvious from what has been stated above that the Committee found it difficult to suggest any additional measures to minimise the prevalence of Malaria in the Hospital. It was found that a storm-water drain in the hospital compound required to be relaid and graded on a suitable and uniform level. This work has now been done.

25. The Committee learn that the Government and the Municipality are taking steps to render the wells situated on the maidan mosquito-proof and the Municipality propose to remodel the storm-water drains and to provide the entrance to these drains with iron covers to be used during the fair season.

26. The Committee considered the question of rendering the Hospital mosquito-proof, by providing wire-gauze doors and windows. They are of opinion that there are great difficulties in the way of rendering the Hospital mosquito-proof, moreover they believe that this measure will greatly interfere with the convenience of the patients and their friends and eventually might render the Hospital unhealthy by depriving it of natural ventilation. They therefore suggest that as an experimental measure a small section of the Hospital should be made mosquito-proof with the object of testing the practicability of the method. The portion of the Hospital which might conveniently be selected consists of one ward.* The area proposed to be treated is about one-sixth part of the men's side of the Hospital and one-eighteenth part of the whole Hospital including officers. The Executive Engineer, Presidency, has submitted a plan and estimate for this work, which amounts to Rs. 3,727. The cost of making the whole Hospital mosquito-proof would therefore amount to Rs. 67,086. There would also be an annual recurring expenditure on keeping the wire-gauze in repair.

* With 14 beds and one private ward adjoining the general ward.

53. As gully traps breed larvæ to a very great extent it was decided by the Municipal Commissioner that in case of new buildings tight-fitting cast iron covers be provided. A cover was designed and approved of by this office with certain alterations and recommended to the Drainage Department.

54. The "Hoj" or reservoirs in Musjid were inspected during the year and no larvæ were found in any of them.

55. *Roof Gutters.*—The roof gutters of 15 houses round about the European General Hospital were inspected for larvæ and in only two places culex larvæ were detected. Larvæ were also found in roof gutters in several houses in Fort, and Esplanade and the owners were addressed to properly slope the gutters and to remove all obstructions.

56. Big wells for irrigation purposes from which water is drawn by moats (kosh) by means of bullocks and which breed larvæ, hermetical covers with handpumps were at first demanded but as the owners represented to us that a large quantity of water cannot be thus obtained, a special cover was designed by Messrs. Chambers and Fritchley on behalf of Messrs. Sassoon & Co. The well in such cases is covered over with concrete leaving an opening 10′ × 4′ (for 2 moats) or 6′ × 4′ (for one moat). On this opening an iron sliding trapdoor working on pulleys and to be drawn by handles is fixed and the well made mosquito-proof. This concession was much appreciated and such covers have been provided over many wells. I attach herewith two diagrams showing covers of this pattern.

57. There are a few *underground cellars* in Byculla and Fort, flooded during the rains and breeding larvæ. In connection with this, the Municipal Commissioner was addressed as follows :—

"I have the honour to state that our Building Bye-laws provide cellars, vaults and underground rooms. Bye-law 7 runs as under :—

> "Except with the written permission of the Municipal Commissioner no person shall construct any cellar, vault or underground room either under, or as part of a building, or otherwise."

There are a few of such underground cellars in A and E wards. These cellars do not remain water-tight and during the rainy season a good deal of water collects inside and acts as a breeding place for mosquitoes, *e.g.*, the cellar in the Salvation Army Head Quarters at Byculla.

A cellar has been recently constructed inside the Tata's New Palace on Waudby Road and although all possible precautions have been taken to make it water-tight, I found on my inspection about 2 ft. of water therein and thus acting as a breeding place for mosquitoes; water is also found in cellars in Messrs. Whiteaway Building and in No. 93 Bhuleshwar Road.

It would be advisable not to give any permission for such cellars if they cannot be kept dry and water-tight.

I am therefore of opinion that such cellars should not be allowed in the City in future."

58. *Storm-water entrances.*—As storm-water entrances are the main sources of culex and stegomyia mosquitoes, wrought iron plates were purchased at a cost of Rs. 4,000 out of the Malaria Grant and these were fixed under the grated storm-water covers after the rains so as to make them quite mosquito-proof.

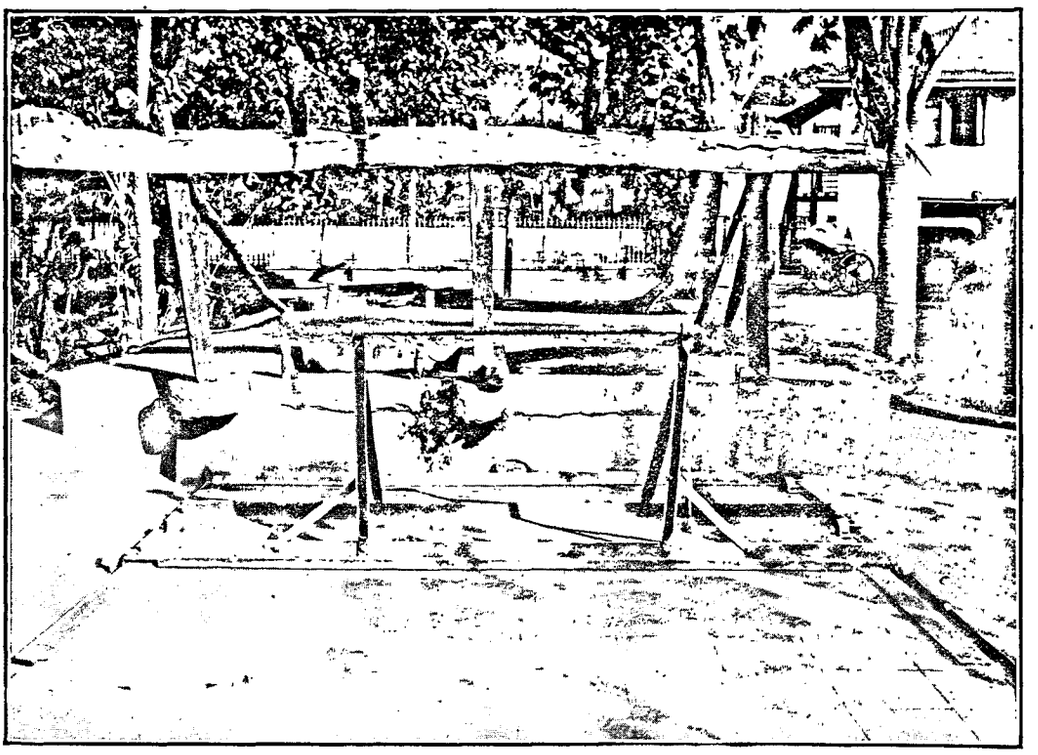
59. In addition to this the Corporation sanctioned a sum of Rs. 95,500 for providing concrete covers over storm-water entrances in A Ward and for remodelling the old storm-water drains. Owing to war, this amount has been reduced to Rs. 25,000.

60. The following rules were approved of by the Municipal Commissioner for new wells sunk for building purposes in contravention of Section 381A of the Act :—

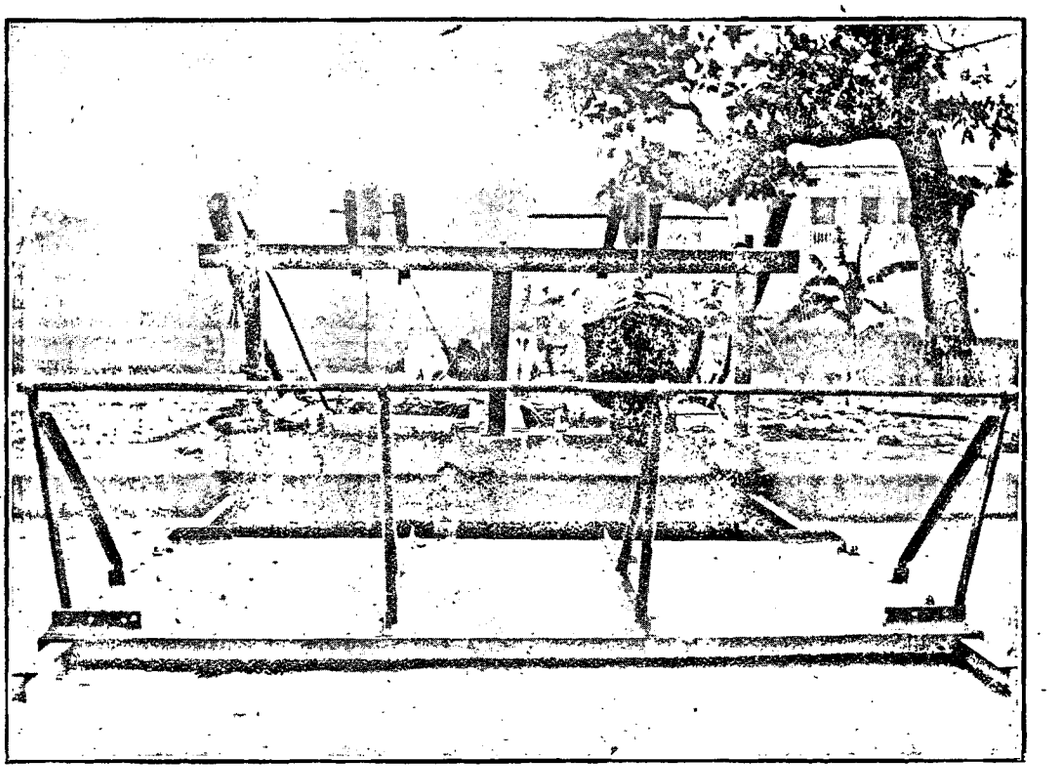
> "(*a*) That all such wells should be hermetically covered over with concrete with handpumps fixed.
>
> (*b*) That an undertaking be taken from parties that after the building work is finished, the well should be filled in."

61. The following new rules were also approved of by the Municipal Commissioner for embodying them in the water connection rules :—

> "No water taps should be allowed in any compound unless the place underneath is paved and drained.
>
> "Removeable receptacles are better than fixed masonry ones, as the former can easily be manipulated.



WELL COVERED OVER WITH CONCRETE AND AN IRON SLIDING TRAP-DOOR WORKING ON PULLEYS FOR MOATS TO BE WORKED BY BULLOCKS—SHOWING IRON TRAP-DOOR CLOSED.



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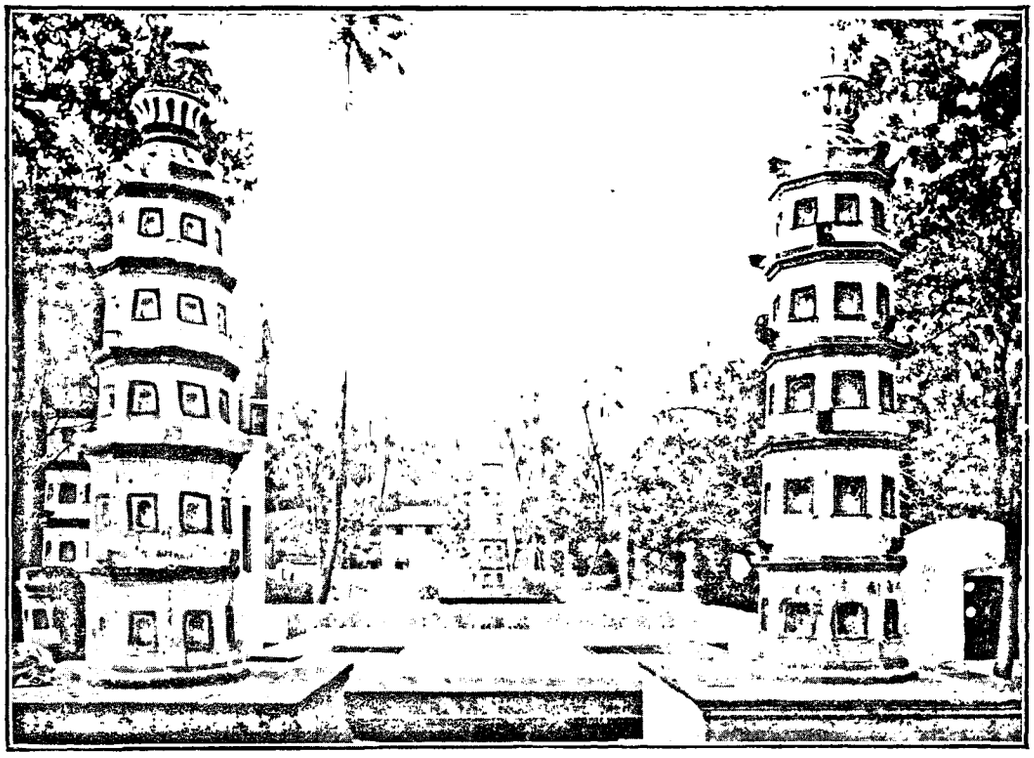
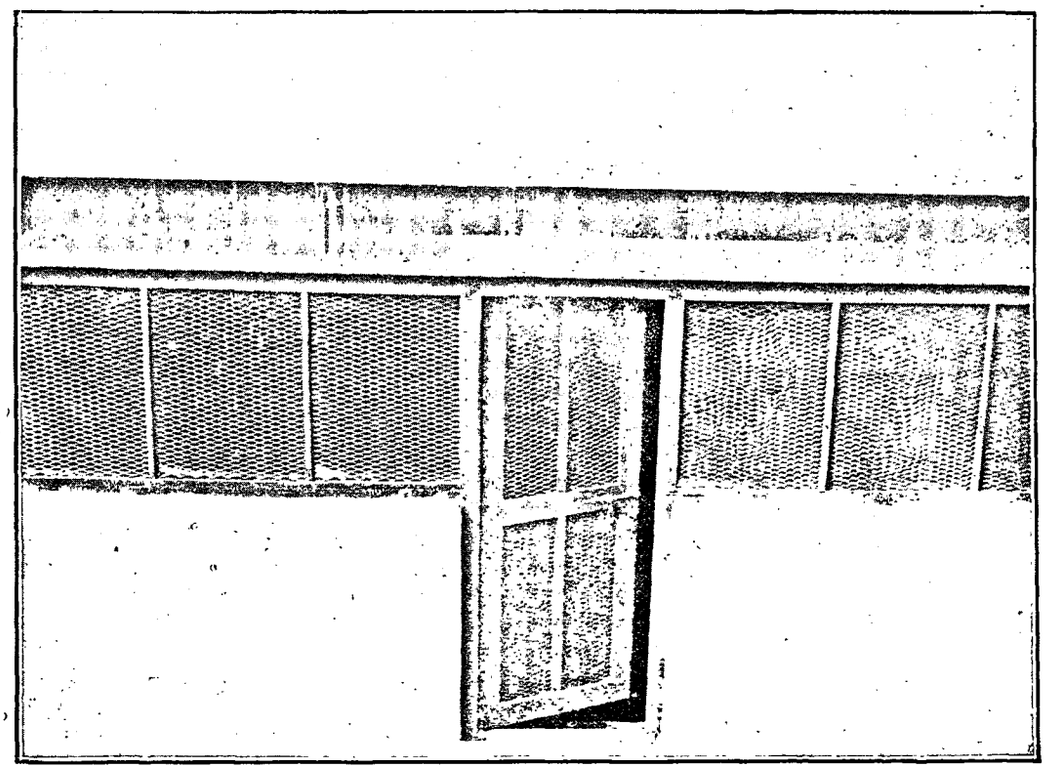


GAMDEVI TANK—CONCRETE COVER WITH WIRE-GAUZE DOOR AND FRAMES (TOP VIEW).



GAMDEVI TANK—CONCRETE COVER WITH WIRE-GAUZE DOOR AND FRAMES (FRONT VIEW).

"If it is intended to provide masonry ones they should be above the ground-level, properly cemented at the bottom and sloped with a hole at the lowest portion for letting off the water.

"Both kinds of receptacles should be cleaned out and completely emptied every 3 or 4 days so as to prevent the breeding of larvæ.

"If this is neglected, then wiregauze covers with or without trapdoors are necessary and are enforced."

62. *The Malabar Hill Reservoir.*—An additional budget grant of Rs. 8,700 was sanctioned by the Standing Committee to meet the cost of rendering each of the filters perfectly mosquitoproof. The work is in progress.

63. *The Clerk Road Basin.*—Steps were taken by the Engineering Department immediately after the cessation of rains to pump out the water from the basin and in about a fortnight it was quite dry, the small pools remaining being treated with pesterine and izal. The nuisance of mosquito breeding in this place was thus greatly abated.

64. *Victoria Gardens.*—This office reported to the Municipal Commissioner as follows:—

"I agree with the Commissioner's first proposal to fill in the whole pond except the wired enclosure as shown in red boundaries in the accompanying plan. The Superintendent wants to retain a further portion in continuation of the same and also a big surface to the east of it as shown by red cross lines in the plan.

"Larvæ of mosquitoes breed even in the wired enclosure. This as well as other ponds required by the Superintendent may be banked up at the sides, cemented in the bottom, and connected to the drain so that the water can be let off every 15 days and the place kept clean.

"As regards the 2nd proposal Victoria Regia pond, it is no doubt a focus for mosquito breeding especially under the leaves but this may be dealt with later on after the other improvements are completed.

"The 105 masonry receptacles should be altered so as not to retain water. The Superintendent wants to have all these but in my opinion so many are not required. It would be better if 3 or 4 big overhead cisterns are provided to store 2 days' supply and connected by pipes to the small masonry receptacles on the lines suggested by the Commissioner and moveable hand water carts provided.

"Concerning the wells reference is requested to the correspondence ending with this office No. 29741 of 4th March 1914.

"In connection with No. 5, it should be entirely filled in.

"With regard to No. 6, the fern-house, these may be dealt with later on.

"There are no other places needing attention at present."

On this the Municipal Commissioner passed the following orders:—

"Two cases are before me.

(1) Regarding two wells.

(2) *Re*: General measures throughout the gardens.

I see the question was considered by Mr. Cadell and even if estimates were available I would prefer not to take a decisive step before his return. All that need be done at present is to fill in the one well which it has been decided may be filled in. As to the other well its covering may be deferred pending the initiation of the other measures suggested. Meanwhile the Executive Engineer should prepare estimates for filling in the manner suggested by the Superintendent with proper drainage arrangements the pond areas other than those marked in red on the map herewith. Estimates also may be prepared for treating in the way suggested by the Health Officer, the water areas that will remain after this has been done. The Victoria Regia pond need not be touched at present.

As to the small masonry tanks I think there can be no doubt that they must be converted so as to be capable of being emptied every 4 days. Though all may be required at present, they cannot all be left permanently after the increase in supply. The Executive Engineer should therefore prepare estimates for rebuilding 50 in the manner suggested in my former note and filling in the rest."

65. *B. B. & C. I. and G. I. P. Railways.*—The area within the Railway lines were frequently inspected and the attention of the responsible authorities was frequently drawn to breeding places in their compounds.

As regards the drains and low grounds on either side of the B. B. & C. I. Railway lines from Mahalakshmi to Mahim, a thorough inspection was made by me with the Railway Engineer and the Agent was requested to fill in the low pieces of ground about 15 to 20 ft. in width full of stagnant water and breeding larvæ all along on either side of the Railway lines and to provide pucca built masonry drain with storm-water entrances if any drainage is required.

66. *Port Trust Areas.*—These are looked after by a special Inspector of the Port Trust who treats all breeding places regularly with pesterine. The low ground is being gradually filled in. The area in the vicinity of the Docks was frequently inspected during the trooping season.

67. *Arsenal, Royal Dockyards, Customs House area and Town Hall compounds.*—These were frequently inspected and the attention of the authorities was frequently drawn to the large number of breeding places.

68. *Foreshore on Nepean Sea Road.*—The area referred to is between Petit Hall and Mr. Watcha Gandhy's bungalow on Nepean Sea Road. In the rocks, larvæ of Anopheles are frequently found, and the City Improvement Trust was requested to reclaim this area, which measures about 107,000 square yards.

Application was made by Mr. H. N. Vakeel for reclaiming this area on certain terms and the following Government Resolution was issued:—

Resolution.—The Chairman, City of Bombay Improvement Trust, should be informed that Government are prepared to agree to lease the reclaimed land in question, after the expiration of the period to be leased by the Improvement Trust, on the following conditions:—

(i) that the lease shall be for 900 years;

(ii) that the restrictions imposed by the Trust as to the area to be built over shall continue during this period;

(iii) that the rent shall be half per cent. per annum on the valuation of the land for the first hundred years, one per cent. for the next hundred years, two per cent. for the next hundred years, three per cent. for the next hundred years, and four per cent. for the remaining five hundred years;

(iv) that this rent shall be irrespective of vacant area and area covered with buildings;

(v) that the valuation of the land for the purposes of calculating the rent shall be taken at Rs. 5 per square yard;

(vi) that the lease shall be drawn up by the Solicitor to Government at the expense of the lessee including the stamp and registration fees;

(vii) that these terms shall hold good whoever may be the Trust's tenant.

2. The Chairman should also be informed that a probable future sea-face road should not be lost sight of in any agreements made.

Recently the Trust have resolved to invite tenders for filling in this area which is a constant source of mosquito breeding in this locality.

69. *Maidan wells.*—There are 7 wells, 4 belonging to the Municipality and 3 to Government.

The Corporation have sanctioned a sum of Rs. 10,524 for covering these 4 wells and fixing handpumps *plus* Rs. 3,000 for cleaning, and the work will shortly be started.

As regards the 3 wells belonging to Government the Executive Engineer has been authorised by Government to hermetically cover the 3 wells with reinforced concrete with handpumps under Government Resolution No. C. W. 13774 of 14th December 1914.

70. *The Khed Tank in Mahim.*—The Corporation have sanctioned a sum of Rs. 13,448 for filling in this tank which is breeding larvæ of both anopheles and culex to a very great extent. The work will shortly be taken in hand.

71. As certain misconception existed in the minds of the public as regards the closing of wells, the Municipal Commissioner in July last issued the following note to the press for the information of the public :—

PRESS NOTE.

" As a good deal of misconception appears to exist regarding the extent of the anti-malarial operations in Bombay and as to the effect which these operations have had upon the water-supply, the following note is issued for general information :—

" Owing to the severe outbreak of malaria in Bombay in 1907 and 1908, Government placed Dr. Bentley, an officer of experience in malarial work, on special duty to enquire into the causes and extent of malaria in Bombay and as to the possibility of taking remedial action. Dr. Bentley's final report after an interim report published in 1910, was issued in 1911. The conclusions arrived at in that report have been confirmed by all subsequent enquiries and have never been seriously contested. They form the basis of all anti-malarial action in Bombay.

" Dr. Bentley's report was re-assuring in the establishment of the fact that Bombay is not itself a naturally malarious area and that the undrained and lowlying portions of the Island which were formerly popularly supposed to be highly infected with malaria were as a matter of fact extraordinarily free from it. Dr. Bentley, however, proved that there was a most dangerous and widely spread amount of malaria in the older parts of the town which caused an enormous loss of annual sickness and consequent economic loss. He further proved that the only really dangerous mosquito so far as the carrying of malaria is concerned within the Island of Bombay, is at present Anopheles (Neocellia stephensi). He established the fact that this mosquito is found principally in wells and that the area of extreme incidence of malaria in Bombay corresponds with remarkable exactness with the localities in which private domestic wells were common.

" One of the strongest proofs of Dr. Bentley's conclusions was the prevalence of malaria among the Parsis. This community from its superior average standard of living, its superior education and the readiness with which its members resort to medical advice, would ordinarily have been considered to be much less liable to malarial infection than the other communities in Bombay. It was found, however, both by the examination of spleen and by tests of blood to ascertain the presence of the malarial parasite, that the Parsi community was far more affected than either the Hindu or the Mahomedan communities. That this was not due to any peculiar racial liability to the disease was established by the fact that in the quarters where the Parsis were extremely affected, the Mahomedans, and Hindus were also affected in a almost the same degree while in the non-malarious parts of the Island, Parsis were not more liable than were people of other races. These facts were acknowledged, after independent investigation by Parsis themselves, to be correct and have not since been in any way challenged.

" Dr. Bentley not only proved that the areas where an examination of spleen and blood showed a very heavy incidence of malaria were precisely those in which domestic wells were common, but he also found that of the breeding places chosen by Neocellia stephensi 65 per cent. were open wells and 16 per cent. other more or less permanent breeding places such as cisterns, fountains, etc., while 19 per cent. were temporary collections of water. This percentage, however, does not fully represent the preponderence of the inside well as the favourite breeding place of Neocellia stephensi ; because Dr. Bentley further found that the wells situated inside dwelling houses were the most prolific producers of this mosquito whereas wells in the open, though frequently infected, showed only scanty proofs of larvæ. The wells moreover constituted permanent breeding places throughout the year whereas cisterns and similar receptacles were chiefly suitable for the production of Neocellia stephensi during the monsoon months only.

" Incidentally it may be remarked that Dr. Bentley proved that mosquitoes of the Culex and Stegomyia varieties, which are the most common and generally the most annoying mosquitoes in Bombay, breed most generally in stagnant or foul water especially in the entrances to storm water drains, which Neocellia stephensi avoids. Neither Culex fatigans nor stegomia has any connection with the spread of malaria and the closing of drains, gutter traps and storm water catchpits though desirable, if possible, for the reduction of mosquitoes in general could have no effect upon the prevalence of malaria.

" Dr. Bentley finally came to the definite conclusion that there was no reason why the highly infected parts of Bombay, which include the A, B and C Wards, should not be reduced at least to the level of non-malariousness which is found at present in the northern parts of the Island. He considered it to be possible to eradicate the local sources of infection which, as has been remarked above, consisted principally of wells. If, on the other hand, such eradication were not undertaken it was obviously possible that not merely would the infected areas continue to be as malaria-ridden as before, but that the infection would gradually spread over the Island until malaria was thoroughly endemic in the whole of Bombay.

" On this report the Corporation sanctioned an extension of the anti-malarial measures already undertaken and Government also gave a grant with the special object of assisting in taking action against infected wells. A special staff was employed and placed in charge of one of the Assistants to the Health Officer who was thoroughly acquainted with the requirements of the work and with the difficulties that had to be met. A great deal of anti-malarial work in general has been done; but this note is intended to deal principally with the action taken in connection with wells. It may be stated at once that no action has been taken in regard to any well unless it is found to be infected with mosquito-larvæ. Out of the 3,313 wells, in A, B, C, D and E wards, these larvæ have been found in 2,202 which have been treated as follows :—

348 have been filled in.

770 have been hermetically covered—123 of which have been provided with hand-pumps.

834 have been covered over with trap-doors allowed.

" In addition to these, 250 wells are under legal action, 16 for filling in, 108 for hermetical covering and 126 for hermetical covering with trap-doors allowed. It should be stated that nearly all of those that have been filled in entirely were altogether bad—many of them had not been used for many years for any purpose whatsoever and the owners made no objection to their being filled in. As regards those which have been hermetically covered, handpumps have been allowed in all cases in which owners desired to put them. This fact is shown prominently in red ink on the notice which is served on well owners. The cost of the handpumps is from Rs. 40 to Rs. 60 each, and the Standing Committee have been willing in every case to assist in allowing these pumps when the smallest reason for doing so existed. It will be observed that in the case of 960 wells trap-doors have been allowed. This has almost invariably been allowed on account of religious objections or prejudices to which the Standing Committee have given the greatest attention, even when they appeared somewhat far fetched. The permission to use trap-doors is, of course, open to very serious objection, from the point of view of efficient anti-malarial prevention. Trap-doors are constantly left open and frequently allow the entry of mosquitoes either through original bad fitting, or through defects in or injuries to the frame work. Out of 834 cases in which the trap-doors have actually been put in, in 119 within the last six months, action has had to be taken, because owing to imperfect closing of the trap-doors, the wells were found to be infected with anopheles larvæ. The Standing Committee have, however, preferred that this risk of malaria infection should be undergone rather than that any religious prejudice of the people should be in any way offended, and have dealt with these cases with consideration and leniency.

" There is, however, another aspect of the treatment of wells. In addition to the facilities which they give for mosquito breeding, it is well known that the great majority of wells in Bombay are highly infected with polluted matter of different descriptions and the water is seldom fit to drink. This may be proved by the fact that on the examination of 1,686 wells undertaken during the last 2½ years the water of 1,412 was found unfit for drinking purposes—that of 84 wells to be fairly potable and of 190 to be fit for drinking. It should be observed that this only represents chemical examination. Had a bacteriological examination been made there can be little doubt that a large proportion of the 190 wells would have been further declared unfit for drinking purposes. This fact is well-known to the people in general, and although there is a small section of the Hindu population which, from religious reasons will not use pipe water at all, the great mass of the people do not under any circumstances, drink the water of these wells, but use it merely for washing purposes in times of scarcity of pipe water. In the great majority of cases, therefore, the provision of a handpump for water to be extracted from a well would meet all requirements.

" It has now to be seen what good results have followed from the action that has been taken. This action has been, as will be gathered from what has been written above, only partial and not such as could be expected to produce entirely satisfactory results. Nevertheless the following table which is extracted from a report prepared by the Health Officer on the 7th May 1914 shows the improvement that has taken place :—

Ward.	Spleen Rate.			Parasite Rate.			Mortality from Malaria.		
	1910.	1912.	1913.	1910.	1912.	1913.	1910.	1912.	1913.
A...	29·9	33·50	15·87	34·8	10·54	2·98	80	91	65
B...	13·0	15·03	3·18	13·1	3·01	2·89	78	101	47
C...	5·9	9·99	4·89	34·5	14·14	1·88	50	58	53
D...	2·7	3·90	3·41	3·8	0·00	0·00	29	22	24
E...	1·8	11·40	4·96	3·8	7·97	5·45	37	56	47

"It will be observed from this table that the spleen and parasite rate in the highly affected A; B and C wards has been very greatly reduced between 1910 and 1913, and this reduction means an enormous diminution in sickness and suffering especially among small children. There has also been within that period a considerable reduction in mortality from malaria in these wards. But the diagnosis of deaths from malaria has been in the past so uncertain and even at present is so imperfect that it is more important to judge the results by the spleen and parasite rates. It will be seen from the figures that the results in D and E wards where anti-malarial operations have been slight, do not show any corresponding improvement during these years. So far as they go these figures are quite satisfactory. In addition, however, to the action taken in regard to wells which has been detailed above, a great deal has been done by constant examination, by serving of notice and by rousing the interest of house-owners to remove casual breeding places of mosquitoes and in several quarters in which the house-owners or occupiers have co-operated in this work, a very real diminution in the number of mosquitoes has been observed.

"It will be gathered from the above paragraphs that while the work in connection with the wells has been proved to be eminently necessary, it has not been carried out in any hasty or harsh spirit. Every case in which there is the smallest objection raised has been considered by the Standing Committee with the greatest care and nearly every disputed case has been visited by the Commissioner personally.

"It remains now to be seen what effect the closing of the wells has had upon the water-supply. It has been stated above that only 348 wells have been totally filled in and many of these were previously entirely unused. 770 have been hermetically covered over, in 123 of which handpumps have been allowed and the Standing Committee are perfectly willing to allow them in the remaining 647. Taking, however, the highest figure, less than 1,000 wells have been filled in or covered so as to prevent (in the absence of a pump) the use of their water. In the majority of these cases the water had not been used for drinking purposes for years. The real grievance regarding the shortage of water lies not in the closing of a certain number of extremely insanitary wells, but in the general shortage of the water-supply. It is well known that this supply has been extremely deficient for the past few years. While the demands of the population and trade have steadily increased, the available supply has actually diminished, because, owing to a series of years of short rainfall, the amount of water in the Vehar Lake has so decreased that it has been necessary to reduce the previous daily supply of 10½ million gallons to 7½ or 8 million gallons per diem. In the meanwhile not only has the trade of the City increased, but new mills, which consume a large amount of water, have been erected. The supply required for trade purposes has been given out by the Water Engineer in the most sparing manner possible. But if the industries of the City are not to be most seriously hindered it is not possible to limit these demands altogether and any further supply for trade and industry necessarily means reduction of domestic consumption. In the years 1912 and 1913, although the water-supply was short and people underwent a very considerable amount of inconvenience, there were fortunately no serious breaks in the water-supply; the deficiency of water was borne with patience, and no very serious situation arose. In the present year, however, there were unfortunately within a short period a number of breaks, such as are liable to occur at any time and which cannot be altogether avoided. Usually it is possible to diminish the inconvenience caused by the cessation of supply in one part of the Town by giving assistance from the other portions of the City, but for various reasons, such as the cotton fires and heavy demands elsewhere, it has not been possible to do so in the present year. This has brought about an acute feeling of dissatisfaction, and it is not unnatural that people should readily believe exaggerated accounts of the effect of the closing of wells and should regard such closing as the cause of the discomfort which would not have been appreciably diminished had all the wells in the Island remained open.

"At the same time it must not be forgotten that there have been other causes which have accentuated the deficiency of water. In many places, high houses and chawls for many hundreds of inhabitants have been erected where only small buildings existed previously, for which the supply of water had been sufficient in the past. Water does not reach the upper parts of these houses, and owners have been constantly advised to put in storage tanks and pumps, where the pressure is deficient to raise water to the upper floors. Although storage tanks have been put in to a considerable extent, landlords have been unwilling to provide pumps. The expenditure involved not unnaturally makes them unwilling to do so. But it may be remembered that rents have been enormously raised within the last few years and never before has there been such a demand for house accommodation of almost very description. It may be presumed that the returns of house-owners have been correspondingly large.

"Fortunately, however, the acute discomfort which is now felt has come at a period when its termination is well within view. The arrangements for an increase water-supply which were not sanctioned by the Corporation until 1911 have been pushed on with the greatest rapidity and fortunately with no serious hitch of any kind, although the sickness among the staff employed has been very considerable. Before the beginning of the next hot

weather it will be possible to introduce certain amount of Tansa water into the Vehar Lake. From the Vehar Lake a 48 inch main has been laid in place of the 32 inch main, and it will be possible, immediately Tansa water has arrived in the lake, to increase the daily supply from the present 7½ million gallons to 11 million gallons per diem. This will only constitute a partial relief, though it should be of great help in the case of any break in the pipes. The new Tansa supply itself, however, may be expected to be available for the City by the end of 1915, or allowing for delays early in 1916. The distribution will not be perfected for some time after as various subsidiary works have to be done, but for all practical purposes there should be an ample supply of water before the hot weather of 1916 begins. With this early and certain prospect of a plentiful supply of water it may be hoped that the people of the City will once more show the same patience with which they have borne the scarcity of water in the past. It will, it may be hoped, be agreed from what has been written above that it is not possible to suspend anti-malarial operations which are absolutely necessary for the health of the people and which have a very remote connection with the water-supply. These operations will be continued, as they have been in the past, to be carried on with the greatest possible regard for individual or general prejudices. No doubt the anti-malarial work affords opportunity for possible petty corruption just as any other branch of the administration in this country does. Attempts at extortion, however, can be more easily detected in this than in any other branch of the Municipal administration, because no anti-malarial work can possibly be taken except where malarial conditions have been shown to exist, and even then action is taken, not on the report of the subordinate but after inspection by the Malaria Officer and in contested cases by the Health Officer or Municipal Commissioner. Where such conditions do exist, and subordinates are bribed not to report them, it is not possible to feel much sympathy with the person giving the money. In any case complaints can readily be made to the Commissioner himself, or to the Special Malaria Officer, and they will be the subject of careful inquiry."

72. Subsequently representations were made at a meeting in Town Hall by the Citizens of Bombay under the chairmanship of Hon'ble Mr. Manmohandas Ramji to H. E. the Governor about the hardships experienced on the Malaria campaign, and the following reply was sent by the Municipal Commissioner to Government :—

" With reference to your endorsement No. 7274, dated the 14th September 1914 forwarding a copy of the petition regarding the measures taken to check Malaria in Bombay, I have the honour to state that the main motives which underlie the agitation against the action taken with regard to wells may be divided into two heads. Firstly actual scarcity of water in the town and secondly supposed or alleged interference with the religious feelings or prejudices of the people. As regards the first head there is undoubtedly an insufficient supply of water in the City and it is for this reason that active measures are being taken to increase the water-supply. The increased supply ought to be available next year. In the mean time one must feel sympathy with the inconvenience caused by the shortage of water; but it must be pointed out that the closing of wells has very little to do with this. In the first place nearly the whole of the wells that have been closed have contained water that was entirely unfit for drinking. In the great majority of cases the people themselves would never have used them for that purpose, however short they might have been of water. Even had all these wells remained open it would not have affected the question of water-supply. In many cases no doubt well water is used for washing and domestic purposes and forms a useful supplement to the water-supply of the city. Such water however can be drawn without any real inconvenience through handpumps and these handpumps have never been refused when asked for. When the ordinary water pressure is insufficient it would be much better supplemented in the vast majority of cases by the use of force pumps and storage tanks than by the help of wells. The supply, however, though never quite sufficient is not so small as to cause great inconvenience except when there are bursts. These bursts only average about 5 a year: but in the present year there were unfortunately several large bursts and owing to excessive cotton fires and other reasons it was not possible to supplement the supply in the affected quarter from other quarters of the town. This deficiency of water has caused a feeling of irritation and people are easily led to believe that the action taken against wells is the reason for the want of water. As I have said, this is not correct; but in any case the supply should be so largely supplemented by the next hot weather as to far more than make up for any diminution caused by the decreased use of well water. As regards religious feelings it may be pointed out that action was at first taken chiefly in Parsi houses because these contained, in a far larger proportion than those of any other community, interior wells. In all such cases trap-doors were allowed and Parsis generally satisfied with this permission. It is only when action against wells began to affect the Hindu Communities who object to the use of pipe water that the religious agitation became at all noticeable. The number of these people who are called Marjadis is considerable though I do not believe it amounts to anything like 50,000 as stated in the petition. When I made an inquiry sometime ago the number of strict Marjadis appeared to be between ten and fifteen thousand. Their religious prejudices must of course be observed and there has never been any intention of doing otherwise. In every

case in which religious objection has been urged a trapdoor has been permitted though allowed on the obviously necessary condition it must be kept closed when not in use and that it must be made mosquito-proof. These conditions are constantly broken; but the trapdoor is invariably allowed to remain where religious feeling really demands it. In some cases however Hindus are objecting even to the use of trapdoors and are demanding that the well should remain altogether open. This is not required by any religious belief or prejudice whatsoever and would obviously be a negation of the whole malarial policy.

"2. These are the two real points in the petition. Dealing however with petitioner's statements in some of their details I would state that it is not the case that there has been any change of policy since the necessity of taking active steps to cope with Malaria was decided upon by the Corporation after full consideration of Dr. Bentley's report.

"The Municipal Act was specially amended in 1913 to allow of more effective action being taken as regards wells and after the Act was so amended action was taken in a large number of cases. Such action however was never summary nor ill-considered. In the first place no well whatsoever was ever dealt with until anopheles larvæ had been found to breed in it and after that legal notices were served on the parties. After notice, lies an appeal to the Standing Committee and the sanction of the Standing Committee is necessary before action can be taken if such an appeal has been made. In addition to this every well is seen by the Malaria Assistant to the Health Officer and whenever any serious objection is made, and invariably if the party desires it, the well is seen by the Commissioner personally. In the earlier days of the campaign against Malaria I saw a very large number of wells myself and I have only ceased to do so now because the circumstances of the wells are well understood and my own inspection is seldom asked for. Resort to the Magistrate's Court is only had as a last resource and even then cases are withdrawn upon compliance with notice and summons and upon undertaking being given to comply with the requisition. As a proof of this statement I may state that although 4,777 wells have had to be examined in the City, and action whether in the direction of covering or allowing trapdoors or fish trial has been taken, in 3,489 cases, only in 712 cases has any legal action been taken. In 611 cases out of these 712 cases the complaint was withdrawn and in 88 cases convictions have been obtained. I may state that Government have generously given a grant to assist those who cannot afford to carry out Municipal requisitions. This assistance has been given wherever it has been reasonable to do so.

"3. It is not the case, as is suggested in the petition, that Dr. Bentley said that action should be taken only against such wells as are inside houses. Wells inside houses are obviously the most dangerous and action was therefore taken against them in the first place and they have been to a very large extent adequately dealt with. Wells however in the proximity of houses are only a degree less dangerous since they are still close to the human population. Dr. Bentley recommended fish trials, and both the Khajura and Piku fish have been fully tried, and where people yet desire to make this trial it is permitted. Fish however seldom prove successful in wells. They can only succeed in keeping down mosquito larvæ when there is no vegetation or leaves, etc., in the wells, and they require to be replenished every one or two months; while in foul wells they will not survive at all.

"With regard to the petitioners' request in clause (*b*) para. 7, I would state that as handpumps are invariably permitted when asked for in hermetically closed wells there is no necessity to open such wells or to allow trapdoors. This should only be done on the ground of religious sentiment and where these religious sentiments were found to exist, a trapdoor was invariably allowed in the first place. With regard to para. 7 (*c*), I may state that it is quite impossible to keep the water of wells and tanks in Bombay in a fit state for drinking purposes. Water permeates into these tanks and wells through a soil which is polluted through the residence upon it of many generations of a large population and therefore could not be treated so as to become safely potable.

"4. I append a copy of a note which I sent to the Press soon after my return to Bombay and before the public meeting at which the petition under report was adopted. The statements made in that note have never been disproved, or even disputed so far as I am aware. I venture to think that if these statements are correct, they show that the action taken by the Municipality has been in no way inconsiderate or oppressive. To do less than we have done would be in fact to do nothing at all. Dr. Bentley's report, the conclusions of which have never been seriously disputed, indicates not merely the sources of malarial danger in Bombay but also the means and possibility of coping with it. The object aimed at by the policy founded on that report is worth aiming it. It may be impossible of attainment but it certainly has not yet been shown to be so. It would be an extreme pity to abandon that policy merely at the desire of a section of the population who are partly misinformed and are partly suffering from an inconvenience with which the malarial policy has no real connection. I may state that by the work of the Special Malaria Department the location of all wells and cisterns and many other breeding places of anopheles in the city has been fairly fixed and I shall probably be in a position shortly to make proposals to attach the Malaria Inspectors to

the ordinary medical staff of each ward. By combining the ordinary malarial and sanitary work, the necessary inspection can be efficiently carried out without attracting the special notice which now attaches to the Malaria Department.

" 5. Finally I may state that the Corporation have appointed a further Committee to enquire into the question. I should be glad of any such enquiry because it cannot fail to establish that the action so far taken has been in strict accordance with the policy approved by the Corporation itself and that it has not been carried out with any harshness or want of consideration. "

73. To this petition, Government sent the following reply :—

" I am directed to state that after careful enquiry and consideration Government are unable to accept the views set forth in the petition as to the necessity of modification, in the direction suggested, of the policy pursued by the Municipality in regard to the closing and treatment of such wells.

(2) With reference to the objection based on the allegation that the policy of the Municipality has the effect of reducing the available water-supply at a time when there is already a general shortage of supply, I am to observe that the great majority of the wells which have so far been dealt contained water which was unfit for human consumption, while in so far as the water from them could be used for domestic purposes, there has been nothing to prevent its being drawn by means of the handpump, of which the Municipality have permitted the installation whenever it has been applied for. The recent general shortage of the water-supply in the city is admitted, and action is being taken which, it is hoped, will, in the near future, effect a radical improvement in this respect, but it is not correct to attribute this shortage to the action of the Municipality in regard to wells, or to infer that had this action been other than it was, the shortage would have been avoided or materially reduced.

(3) Government, on enquiry, find that the allegations made in the petition as to the highhanded and unsympathetic enforcement of the measures in connection with wells by the Municipal Executive are not supported by actual facts. Out of 3,489 wells which have been dealt with upto date, in the case of only 101 have legal proceedings been carried through against the owners for non-compliance with the requisitions of the Executive. In every case before a requisition is finally made, the well is seen by the Malaria Assistant to the Health Officer, and, if the owner so desires it, by the Municipal Commissioner himself. The owner has, moreover, the right of appeal to the Standing Committee. Finally a Government Grant is available, from which assistance is given to such owners as cannot afford to carry out the Municipal requisitions.

RELIGIOUS GROUNDS.

(4) " With regard to the objections based on religious grounds, I am to observe that in every case where objection has been taken to the closing of a well on such grounds the use of a trapdoor has been permitted. It is understood that it is claimed that wells in such cases should remain entirely open, but this is not required by any religious belief and would involve the negation of the whole policy of malaria prevention.

(5) " The statement made in the petition that Dr. Bentley recommended that action should be taken only against wells which are situated within houses is incorrect. Such wells are obviously the most dangerous of all wells, but wells in the proximity of houses are only slightly less dangerous for they are in close proximity to the human population. Action in regard to this latter class of wells cannot therefore be foregone.

(6) " With regard to the request that the wells which have been hermetically covered up should be open. I am to observe that the necessity for this concession is not apparent in view of the possibility of drawing water from them by means of hand pumps. Where religious scruples prevent resort being had to pumps, trapdoors have already been allowed.

(7) " The suggestion that measures should be taken to improve the quality of the water of wells and tanks so as to make it fit for drinking purposes does not appear to be a practicable one. The water which collects in these wells and tanks percolates through a soil which has been polluted by the residence upon it of several successive generations of a large population, and it could not therefore be so treated as to become safely potable.

(8) " In conclusion I am to state that the Governor in Council attaches the highest importance to the measures which are the subject of the petition. Their object is the removal of the principal sources of malaria in Bombay with a view to the improvement of the health of the citizens and such progress as has so far been made in giving effect to them has been productive of results which are distinctly encouraging. It would, he considers, be an extreme

pity to abandon or stultify the policy which is designed to secure this object merely at the desire of a certain section of the population who are partly misinformed and partly suffering from an inconvenience with which the measures in question have no real connection. He trusts therefore that the petitioners will accept the decision of Government announced in this letter as being in the best interests of the population of the city as a whole."

74. A petition signed by about 25,000 persons was sent to the Corporation on the same subject and it was then resolved by that Body as follows :—

No. 4073.

"That in reply to their letter, without date, regarding the closing of wells and tanks in the City (received with Standing Committee Resolution No. 3664, dated the 27th August 1914), Messrs. Merwanji Mancherji Cama, Narottam Morarji Gokuldas and others be informed that the question of dealing with objectionable wells has been receiving the most careful consideration of the Commissioner and the Standing Committee, and that care has always been taken and will be taken to avoid hurting the religious susceptibilities of the people and to cause as little inconvenience as possible even in the worst cases."

75. Subsequently the Corporation passed a resolution to the following effect :—

No. 4643.

"That with a view to satisfactorily allaying and setting at rest the existing soreness irritation, and even indignation, prevailing for some months past in an acute form in the Town, a Committee composed of the following Councillors be appointed to consider and report as early as practicable how far and in what direction a new departure is essential for abatement of malarial conditions, bearing in mind the sentiments and feelings of the population :—

* * *

and a Sub-Committee was appointed to report on this question. About a dozen signatories were invited by the Committee to lay their grievances and the question is still under discussion.

76. The following Table shows by Wards the number of wells in each Ward filled in, covered over, &c., upto end of December 1914 :—

Section	Total No. of Wells.	Wells filled in.	Wells hermetically covered.	Do. and hand-pumps fixed.	Covered leaving Trapdoors.	Do. and pumps fixed.	Under fish trial.	Under Corr. with parties.	Cases being covered by Municipal Agency.	Under Notice.	In Court.	Not breeding.
Colaba	65	11	17	2	19	2	1	5	..	3	..	5
Fort South	53	16	20	5	7	3	..	..	..	..	..	2
Fort North	506	54	133	11	211	5	18	14	9	24	2	25
Esplanade	68	14	17	8	14	2	8	2	..	..	..	3
	692	95	187	26	251	12	27	21	9	27	2	35
Mandvi	75	12	15	8	16	1	6	15	1	..	..	1
Chukla	74	7	32	5	12	3	1	10	1	..	..	3
Umarkhadi	49	16	12	3	4	5	4	2	..	..	..	3
Dongri..	14	8	2	1	..	..	..	..	1	..	..	2
Market	264	16	71	32	92	19	9	3	6	5	..	11
	476	59	132	49	124	28	20	30	9	5	..	20

Section.	Total No. of Wells.	Wells filled in.	Wells hermetically covered.	Do. and hand-pumps fixed.	Covered leaving Trapdoors.	Do. and pumps fixed.	Under fish trial.	Under Corr. with parties.	Cases being covered by Municipal Agency.	Under Notice.	In Court.	Not breeding.
Dhobi Talao	404	31	81	9	200	7	17	40	4	..	1	14
Fanaswadi	253	17	28	13	81	12	9	44	6	3	2	38
Bhuleshwar	175	12	38	11	43	6	3	27	1	..	1	33
Khara Talao	12	1	1	..	4	..	1	3	..	..	..	2
Kumbharwada ..	48	3	6	2	14	2	3	14	1	..	2	1
	892	64	154	35	342	27	33	128	12	3	6	88
Khetwadi	219	34	52	11	68	9	5	15	3	..	1	21
Girgaum	332	25	82	9	53	9	5	49	2	4	1	93
Chowpati	140	30	41	4	32	4	5	17	..	..	1	6
Walkeshwar	121	17	14	5	27	6	5	16	1	2	1	27
Mahalakshmi	89	10	13	7	16	2	6	18	..	1	..	16
	901	116	202	36	196	30	26	115	6	7	4	163
Mazagon	93	14	13	1	15	3	2	31	..	..	..	14
Tarwadi	111	20	19	3	18	7	5	24	1	2	3	9
2nd Nagpada ..	8	1	3	..	1	..	..	..	..	2	1	..
Kamathipura	8	3	3	..	1	..	..	..	..	..	..	1
Tardeo	31	9	9	..	4	2	..	3	1	..	..	3
Byculla	58	13	18	6	14	1	..	5	..	..	..	1
1st Nagpada	2	1	..	..	1	..	..	..	..	..	..	..
Lower Mahalakshmi ..	37	9	6	2	6	..	3	5	..	..	2	4
	348	70	71	12	60	13	10	68	2	4	6	32
Total of A-E. Wards .	3,309	404	746	158	973	110	116	362	38	46	18	338
			904		1,083			400				
Parel	95	14	8	..	1	2	32	51	..	..	..	19
Sewri	112	..	1	..	1	..	15	16	..	..	..	79
Sion	325	8	..	..	2	1	49	75	..	..	..	158
	532	22	9	..	4	3	96	142	..	..	..	256
Mahim..	546	11	4	1	3	..	80	51	..	..	..	241
Worli	362	13	3	..	..	..	54	39	..	..	..	408
	908	24	7	1	3	..	134	90	..	..	..	649
Grand Total ..	4,749	450	762	159	980	113	346	594	38	46	18	1,243
			921		1,093			632				

77. Very little is being done in F and G wards and our efforts have been mainly in the first five wards of the City.

78. Out of 3,309 wells in A, B, C, D and E Wards, 2,391 have been protected, giving a percentage of 72·25 to the total number.

Out of the remaining 918—

116 are under fish trial.
362 are under correspondence.
38 work to be done by Municipal agency.
46 under legal notice.
18 in Court.
338 not breeding at present.

If we take the whole City (*i.e.*, 4,749 wells) then the percentage of wells and tanks protected (*i.e.*, 2,464) to the total number comes to 51·88.

79. The following Table shows the number of prosecutions for *Wells and Tanks* instituted and their results from the beginning of the Malaria Department upto the end of 1914 :—

Years.	Total No. of prosecutions instituted.	Nos. complied with, withdrawn and acquitted.	Nos. convicted and fined.	Amount of fine.	Percentage of convictions to the No. of cases heard.	Remarks.
				Rs. a. p.		
1912 ..	99	79	13	134 0 0	14·34	7 cases postponed to next year.
1913 ..	389	296	45	479 0 0	13·19	55 do. do.
1914 ..	226	228	32	434 0 0	12·30	21 do. do.
Total ..	714	603	90	1,047 0 0	12·98	21 do. do.

80. The following Table shows in a tabular form the actual work done during the year and also the figures for the same from the beginning of the Malaria Department upto the end of the last year :—

—	1912.	1913.	1914.	Total from the beginning.
No. of wells filled in	244	119	87	450
No. of wells hermetically covered	400	332	189	921
No. of wells covered with Trap-doors	381	407	305	1,093
No. of wells covered, etc., without resort to Legal action ..	616	343	248	1,207
No. of wells, etc., reported to the Standing Committee or the Municipal Commissioner	250	547	321	1,118
No. of wells, etc., in which sanction of the Standing Committee or Municipal Commissioner was received ..	214	531	321	1,066
No. of houses inspected by the staff (including repetitions) ..	208,804	217,366	175,770	601,940
No. of notices issued re : cisterns, etc.	....	119	1,253	1,372
No. of cisterns hermetically covered	1,161	690	2,428	4,279
No. of children examined for spleen	12,026	18,613	10,347	40,986
No. of blood slides examined	1,333	1,717	1,207	4,257
No. of larvæ samples classified	3,517	2,722	1,204	7,443
No. of Lectures delivered	15	7	2	24
Quantity of Quinine distributed	32,650	51,604	30,476	114,730
Grs. ii	9,400	13,150	8,050	30,600
Grs. iv	23,250	38,454	22,426	84,130
No. of pools treated with pesterine	11,473	39,435	47,679	98,587
No. of odd receptacles removed	....	....	3,878	3,878
No. of letters outwarded	27,780	31,236	34,053	93,069
No. of letters inwarded	20,043	22,940	27,793	70,776

Figures for 1912 include those cases also as are complied with prior to 1912.

81. The total expenditure of this Department from April 1912 to 31st December 1914 was about Rs. 1,52,261.

82. The staff, both outdoor and indoor, worked satisfactorily.

I have the honour to be,
Sir,
Your most obedient servant,

K. B. SHROFF, L.M. & S., D.P.H., D.T.M.,
Special Assistant to Health Officer, Malaria.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

Report of the Analytical and Bacteriological work done in 1914.

I have the honour to submit the following report of work done in the Municipal Laboratory during the year 1914.

During the period under report, 8,949 samples were examined (1,841 chemically and 7,108 bacteriologically)* showing an excess of

3,860 samples over those of 1909.
4,447 „ „ „ „ 1910.
3,751 „ „ „ „ 1911.
3,274 „ „ „ „ 1912.
983 „ „ „ „ 1913.

This enormous increase is chiefly due to the Special Research work, particularly in connection with milk. In connection with research work, 3,085 samples were examined. If these were to be excluded, then there would be hardly any difference between the total number of routine samples examined during recent years and those examined in 1914.

THE FOLLOWING IS A BRIEF SUMMARY OF THE GENERAL WORK.

I. Chemical.—The chemical analysis includes the following:—

(*a*) Examination of *Food-Stuffs* of various kinds;
(*b*) „ „ *Public Water-Supply* fortnightly and *Well Waters* daily;
(*c*) „ „ *Fats and Oils*, other than edible;
(*d*) „ „ *Drugs and Disinfectants*;
(*e*) „ „ *Urine* for diagnostic purposes;
(*f*) „ „ *Miscellaneous samples*, such as Lime, etc., etc.

(a) The total number of *Food-Stuffs* examined was 737, as detailed below:—

Names of Food-Stuffs.	Genuine.	Fair and Good.	Doubtful Purity.	Not Genuine.	Tests for Morphine.	For % of Fat.	(Source of water used in the manufacture) fit for potable purposes.	Special Samples.	Total.	Remarks.
Milk	1:2	5	9	135	..	8	..	217	486	
Butter	1	..	..	..	..	..	..	3	4	
Ghee	4	1	..	3	..	..	..	7	15	
Oils	53	19	..	7	..	..	..	..	79	†
Tea	4	8	..	19	26	..	..	..	57	‡
Coffee	5	8	..	..	..	..	..	..	13	
Flour	63	6	..	..	..	..	..	..	69	
Ærated Waters ..	..	..	..	..	..	..	6	..	7	§
Vinegar	..	..	..	..	..	..	..	..	..	
Bread	..	2	..	..	..	..	..	..	2	
Honey	..	1	..	..	..	..	..	..	1	
Sauce	..	..	..	..	..	..	..	..	2	‖
Total ..	242	52	9	164	26	8	6	227	737	

* Examination for each kind of microbe is counted as one sample as hitherto; otherwise the actual number of articles examined bacteriologically comes to 3,624.

† Includes those examined for Burning purposes and White Oil adulteration.

‡ Tests for Morphine "Negative."

§ Includes one sample, examined for Quinine and Mineral poisons; the former was detected, while the latter was not detected.

‖ Did not show signs of decomposition.

(b) *Examination of Public Water-Supply, Etc.*

580 samples of waters were examined of which 263 samples were of Public Water-supply, as detailed below :—

Sources.	For Potable Purposes.					Loco-motive.	Total.	Remarks.
	Fit.	Fair.	Objec-tionable.	Suspici-ous.	Unfit.			
Public supply	..	..	..	..	..	..	263	
Wells	40	28	42	18	164	..	292	
Tanks	..	..	1	..	2	..	3	
Storage tanks*	6	..	..	..	3	..	10	†
Not specified	..	1	..	..	6	5	12	‡
Total ..	46	29	43	18	175	5	580	

* Including Rain Water Tanks.
† Includes a sample of basin water examined microscopically and macroscopically.
‡ Includes a sample of water taken before and another taken after filteration from an ice factory.

(c) *Examination of Fats and Oils other than edible.*

In this connection, 15 samples were examined as classified below :—

——	Fats.	Kerosine Oil.	Yellow Oil.	Total.
Not coloured according to the colour of Standard office sample	9	..	..	9
Chemical Tests	3	..	..	3
Flash-Point	..	2	1	3
Total ..	12	2	1	15

(d) *Examination of Drugs and Disinfectants.*

Eight samples were examined under this heading as enumerated below :—

——	Chemical composition.	Proof Spirit percentage.	Purity.		Total.	Remarks.
			Fair.	Good.		
Zondo Fluid	1	..	..	..	1	Effects on human system not known.
Glycerine	..	..	1	..	1	
Medicated Wine	..	1	..	..	1	
Sulphur	..	..	..	2	2	Used for disinfecting purposes.
Hydrochloric Acid	..	..	3	..	3	
Total ..	1	1	4	2	8	

(e) *Examination of Urine for diagnostic purposes.*

483 samples of urine were examined, of which one was received from the Special Assistant Health Officer, Arthur Road Hospital, and the remaining from Private Medical Practitioners.

(f) *Examination of Miscellaneous samples.*

The total number of samples examined in this case was 18, as detailed below:—

1 of Bone Sinews.
8 of Lime for % of Lime.
1 of Lead „ „ „ Lead.
1 of "Akonia" for Qualitative and Quantitative.
1 of Cement „ „ „ „
3 of Mortar „ % of Calcium Oxide.
1 of "Pith" „ melting and softening points.
1 of "Jar" for devising of apparatus for removing the nuisance caused by the noxious gases evolved during the process, *vide* Special work report.
1 of Soap for quality.

Total 18.

II. BACTERIOLOGICAL.

This consists of

(A) Examination of Food-Stuffs;
(B) „ „ Public Water-Supply fortnightly and other waters daily;
(C) „ „ Disinfectants;
(D) „ „ Glycerinated Vaccine;
(E) „ „ Blood, Sputum, Stools, Urine, etc., for diagnostic purposes.

(A) The total number of samples of Food-Stuffs* examined was 3,052, the details of which are as follows:—

—	Total No. of samples examined.	Number of samples which showed the presence of											
		B. Coli.	Streptococci.	Staphylococci.	Leucocytes.	Lactoes fermenters.	Coli-like.	B. E. Sporogenisis.	Tubercle Bacilli.	Other microbes.	Cholera vibrio.	B. Typhosus.	Diphtheria.
Milk*	2963 †	125	16	..	263	..	..	15	..	219	..	..	..
Meat	1 †	..	..	..	..	..	..	..	..	..	..	..	..
Ærated water ..	1 §	..	..	..	..	..	..	..	..	..	..	..	..
Oysters	86 *	12	..	13	..	..	2	5	..	..	..	..	..
Rice	1 ¶	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	3052	..	..	..	..	..	..	..	..	..	..	..	..

* See foot-note on page 115.
† Includes samples examined for microbes per c.c.; the highest count of microbes per c.c. was 5,54,21,000.
„ lowest „ „ „ per c.c. was 19,00,000.
‡ Tape worm detected.
§ Negative results for B. Typhosus.
¶ Negative results for Cholera vibrio

(B) *Examination of Public Water Supply, etc.*

1,434 samples of waters were examined as follows:—

—	Pathogenic Microbe.	Microbes per c. c.	Total.	Remarks.
Public Supply	1,199*	190	1,389	†
Wells	14	..	14	‡
Tanks	2	..	2	
Not specified	27	2	29	
Total ..	1,242	192	1,434	

(C) *Examination of Disinfectants.*

Twenty-five samples of disinfectants such as Izal fluid and powder, Cresoline and Zondo fluid were examined, with regard to their bactericidal power.

(D) *Examination of Glycerinated Vaccine.*

2,448 capillary tubes of glycerinated vaccine were examined for their sterility before being used, besides supplying sterile water and agar tubes to the Vaccination Department.

(E) *Examination of Blood, etc., for diagnostic purposes.*

In this connection 93 samples were examined as detailed below:—

16 of Sputum for Tubercle Bacilli;
2 „ „ „ Pneumonia;
2 „ „ „ B. Pestis;
10 swabs (Throat) for Diphtheria;
2 „ „ „ Streptococci;
2 of Blood for B. Pestis;
2 „ „ „ Widal's reaction for Typhoid;
2 „ „ „ Relapsing Fever;
5 „ „ „ Malaria;
24 „ „ „ Trypanosomiasis;
3 „ „ „ Septicæmia Hæmorrhagica;
9 „ Urine „ Gonorrhœa;
1 „ „ „ Tubercle Bacilli;
11 „ Stools „ Cholera Vibrio;
1 „ „ „ Microscopically;
1 „ Otorrhocal Discharge.

93

* See foot-note on page 115.

† Pathogenic microbes not detected in any of the samples. Ten samples did not show Lactose fermenters in 5 c. c. and less of water;

Microbes per c. c.

	Highest count.	Lowest count.
Unfiltered	1,185	302
Filtered	516	145
Mixed	570	349

‡ These were examined either for Cholera vibrio or B. Typhosus, the results in all cases were negative, except in the case of one sample of well water, in which Comma Bacilli detected and isolated, but with negative biological tests; one sample, not specified showed B. E. Sporogenes (Milk Test only).

III.—*Central Disinfection Depôt at Northbrook Gardens, Grant Road.*

The work of preparation and issue of rat poison and mercurial solution was continued :—

	Rat Poison.	Mercurial Solution.
Balance on 1st January 1914	11	27
Prepared during 1914	145	150
	156	177
Issued during the period under report	144	164
Balance on 1st January 1915	12	13

IV.—*Special—Work* (1) *Chemical.*

(*a*) Adulteration of white oil with sweet oil.

(*b*) Experiments for the extraction of silver and gold from "Jar" and the devising of apparatus for removing the nuisance caused by the noxious gases evolved during the process.

(*c*) Tea—Special Examination.

(2) *Bacteriological*—

(*a*) Examination for B. Pestis and Plague fleas from Guinea-pigs placed in places infected with Plague.

(*b*) Experiments with Rat bacillus and Mice bacillus from Germany.

(*c*) Examination of Oysters in connection with the shell-fish trade of Bombay.

(1) *Chemical*—

(*a*) 41 samples of oils were examined for adulteration with white oil, but no such adulteration was detected. This is still being continued.

(*b*) Experiments for the extraction of silver and gold from "Jar" and the devising of apparatus for removing the nuisance caused by the noxious gases evolved during the process.

I was asked to undertake this investigation by the Acting Health Officer and accordingly several shops in the vicinity of Mumbadevi were visited and observations were made on the actual process used by the Jariwallas. The following is a summary of experiments conducted in the Municipal Laboratory for the extraction of silver from "Jar" and the removal of the fumes of Nitric Oxide evolved in the process.

I. The extraction of silver from "Jar."

About ½ a tola of the burnt "Jar" obtained personally from a shop at Mumbadevi was taken in a flask of about 300c.c. capacity. 15c.c. of strong Nitric Acid and 5c.c. of distilled water were added and the whole then heated on a gentle flame. A vigorous action soon set in and dense reddish brown fumes of Nitric Oxide were evolved. When the action had ceased and the "Jar" was completely dissolved, the solution was allowed to cool and then diluted with about three times its volume with distilled water. It was then transferred to a beaker and a few pieces of copper plate were dipped into it. The beaker with its contents was allowed to stand over night. Next day a heavy greyish deposit of silver was collected on the copper plate and at the bottom of the beaker. This was washed with distilled water till free from acid, dried, ignited in a crucible and fused with the aid of the blow-pipe.

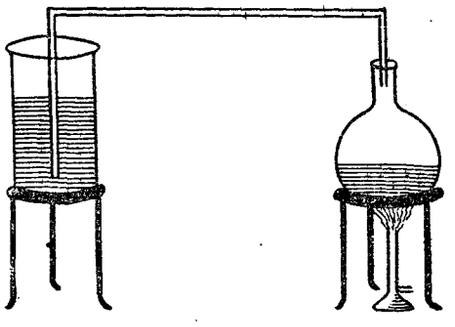
II. Experiment for the removal of the fumes of Nitric Oxide.

(1) A flask containing the "Jar" and Nitric Acid was heated in the fume chamber of the Laboratory. But it was found that the fumes could not rise up and get through the chimney and they all collected in the chamber itself. This is due to the fact that the oxides of Nitrogen are heavier than the air.

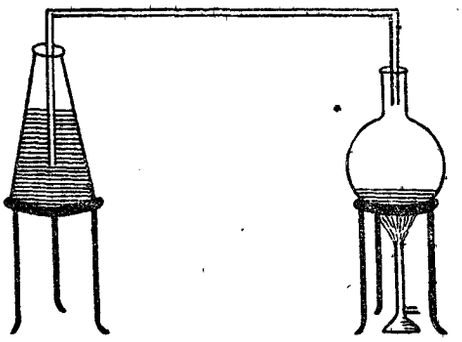
(2) Another flask was connected by means of a stopper with a bent tube, the other end of which was allowed to dip in a 5 per cent. solution of *Ferrous sulphate* contained in a beaker. The fumes were for some time absorbed by the solution of Ferrous sulphate, but in a few minutes the solution was saturated and the fumes were soon given off again.

(3) A similar experiment was repeated and ordinary tap water was used as the solvent instead of a solution of Ferrous sulphate. This was found to work very satisfactory and no offensive fumes were given out for a long time although the quantity of water was not more than 200c.c.

The apparatus used was arranged thus :—

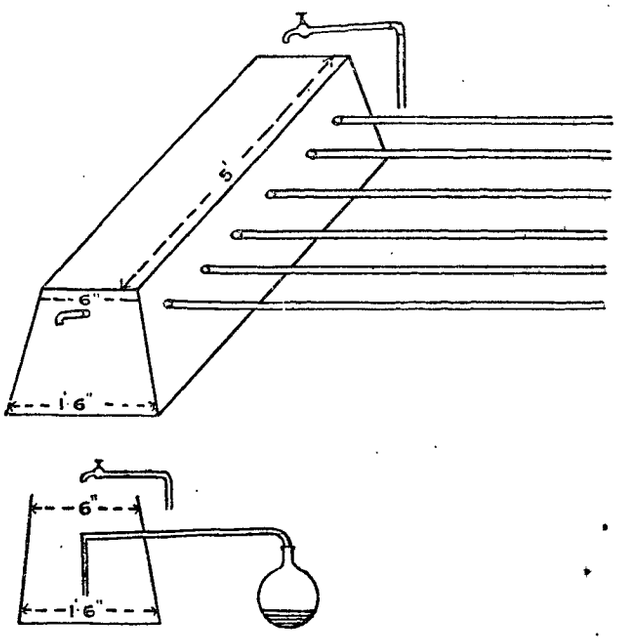


(4) Again a conical flask was substituted for an open beaker for holding the water and this was found to be still more satisfactory.



This apparatus would be quite satisfactory, when the silver is to be extracted on a small scale only.

(5) Suggested design of apparatus for the Jariwallas when the extraction is to be made on a large scale :—



A water-tight trough of either wood or masonry work might be constructed of about the following dimensions :—

5' long, 1'-6" high and 1'-6" broad at the bottom and 6" at the top. It should be provided with a water tap at one end and an outlet pipe should be connected at the other end, say about one foot from the bottom.

Five or six holes should be bored in the two side planks, 10 or 12 inches apart and the *glass tubes* (rubber tubing is acted upon by the fumes) connected with the flasks should be dipped into the trough as shown in the sectional view. In this way ten to twelve flasks could be set working at one time on both sides of the trough.

A steady stream of water from the tap should be set flowing gently.

This arrangement would be of advantage in three ways :—

(1) If the water were not renewed a time might arrive when the water would get saturated with the gases and consequently there might be an escape of the objectionable fumes. This would be prevented by providing a free flow of water as indicated above.

(2) The resulting solution of the oxides of nitrogen with water gives an acid reaction, probably due to the formation of nitrous acid. If the above apparatus be adopted, this would be sufficiently diluted with water to make it almost harmless with regard to its acid properties.

(3) The proposed apparatus is simple, inexpensive and easily procurable.

The process may be summed up as follows :—

(1) $3Ag + 4HNO3 = 3AgNO3 + NO + 2H_2O$.

(2) $NO + NO2 + H_2O = 2HNO_2$.

(C) 26 samples of infusion of tea were examined for the presence of Morphine, with negative results. The presence of Tannin caused considerable difficulty in testing for Morphine in the ordinary way. After trying various methods with "Controls" the following method was found satisfactory :—

The infusion of tea was evaporated down to a small bulk. An excess of Lead Acetate was then added to the solution and filtered. The Tannin was thus removed. The clear filtrate was evaporated to dryness and the alkaloids extracted with Amyl Alcohol. This was again evaporated and then the usual tests for Morphine were applied. Several controls consisting of tea infusion to which was added sugar and Tinct. of Opium or Morphine Hydrochloras were tested similarly side by side with positive results.

(2) *Bacteriological*—

(*a*) Examination for B. Pestis and Plague flea from guinea-pigs placed in places infected with Plague.

46 guinea-pigs were kept in Plague infected localities and were examined for fleas and fleas were detected in 15 guinea-pigs; cultures and smears were made from these fleas and examined for B. Pestis with negative results. Out of these 15 guinea-pigs, six died and from these latter, after a *post-mortem* examination, cultures were made and examined for B. Pestis; with one exception, B. Pestis was detected in all cases. This work is being continued. Besides observations on virulence of certain strains of B. Pestis on guinea-pigs were made.

(*b*) Experiments were carried on with rat and mice bacillus said to be a most effective remedy for killing rats, and the results reported to the Executive Health Officer.

(*c*) Examination of oysters in connection with the shell-fish trade in Bombay.

In this connection, 86 bacteriological tests were performed for various microbes, (as desired by Dr. Goldsmith), the results of which are tabulated under "Food-stuffs" (Bacteriological) q.v.

Research Work in connection with Bombay Milk Supply.

This was commenced in 1913 and in my last Annual Report, I have given the details of the Chemical and Bacteriological Examination of Bombay Milk. The same methods have been used during the year under review. It would take too much space to give the details of the work done during 1914. A brief summary is given on page 123, q. v.

In addition to Bombay Milk, milk arriving from Poona and Ahmedabad was also examined in a similar manner and the results of this are summarised below :— Examination of milk arriving from Poona and Ahmedabad.

130 samples of imported milk were collected from a Model Dairy in Bombay and on examination gave the following average figures per sample:—

Source of supply.	Total No. of samples examined.	Sp Gr. at 60°F.	Total Solids per cent.	Fat per cent.	Solids not fat per cent.
Poona	88	1,029	14·67	5·9	8·77
Ahemedabad	42	1,028	13·98	5·65	8·33
Average of both	130	1,029	14·43	5·9	8·53

Out of these 130 samples of milk 7·7 per cent. showed fat below the standard (5 per cent.)

55·4 per cent. showed non-fatty solids below the standard (8·5 per cent.) 41·6 per cent. showed both fat and non-fatty solids upto the standard or above the standard.

From the same Dairy, referred to above, 118 special samples of milk were examined bacteriologically, the results of which are summarised below:—

Source of supply.	Month.	No. of samples examined.	Average number of microbes per c.c.
Poona	August 1914	11	9,407,000
"	September 1914	20	12,845,000
"	October 1914	19	16,650,000
"	November 1914	21	14,390,000
"	December 1914	5	11,618,000
	Poona, Total ..	76	13,644,000
Ahmedabad	August 1914	12	9,462,000
"	September 1914	20	12,528,000
"	October 1914	10	18,107,000
	Ahmedabad, Total ..	42	12,980,000
	Grand Total ..	118	13,408,000

The average number of microbes per *c. c.* in 118 samples examined was about 13 *millions*: these figures compare favourably with those found in Bombay Milk, *viz.*, about 41 millions.

(*Vide* Observations on the Bacteriological and Chemical Examination of Bombay Milk Supply by Dr. L. L. Joshi, M.D., B. SC., D.T.M. and also my Annual Report for 1913.)

All the above samples showed Lactose fermenters in 1c. c., ·1c. c., and ·01c. c., only two samples from Ahmedabad and three from Poona, showed their presence in a dilution of one in a million, as detailed in the following Statement :—

Source of supply.	No. of samples.	Lactose fermenters in 118 samples of Milk. Dilution of Milk used.						
		1 cc.	·1 cc.	·01 cc.	·001	·0001 cc.	·00001 cc.	·000001 cc.
Ahmedabad ..	2	+	+	+	+	—	—	—
Do. ..	8	+	+	+	+	+	—	—
Do. ..	30	+	+	+	+	+	+	—
Do.	2	+	+	+	+	+	+	+
Poona	2	+	+	+	+	—	—	—
Do.	31		+	+	+	+	—	—
Do.	40		+	+	+	+	+	—
Do.	3		+	+	+	+	+	+

+ =Present. —=Absent.

It has been shown that in the case of Bombay Milk samples, the majority of milk samples showed Lactose Fermenters in one in a million (*vide* my Annual Report for 1913), while in the above, Lactose Fermenters were present in a dilution of one in 100,000.

Neither B. Coli nor B. E. Sporogenes were detected in any of the above samples. The centrifugalised stained deposit examined microscopically did not show any Streptococci. These favourable results are to be ascribed to the fact that all the above samples were pasteurised before collection. It may be remarked that in Bombay Milk, B. Coli were detected in 93·2 per cent. of the samples examined.

It is interesting to note that with regard to the chemical composition, Bombay Milk is superior to the imported milk (from Poona and Ahmedabad), but the latter is better than the former from a bacteriological point of view. This is due to the fact that the milk from Poona and Ahmedabad is *pasteurised* before destribution in Bombay.

The Research work in connection with the Bombay Milk Supply is now almost concluded for the purpose of the present investigation: it is proposed to publish this separately as a special report. The following is a brief summary of this work and the conclusion so far arrived at :—

SUMMARY AND CONCLUSIONS.

Summary of Research Work.

1. There are three principal sources of the Bombay Milk Supply (*a*) in the *City* from the daires, milk-shops, and the individual milk-vendor; (*b*) from the *suburbs* in the Island of Salsette, mostly brought in railway trains to the local stations in Bombay; (*c*) from the *mofussil*—*e.g.*, Ahmedabad, Poona, &c.

2. The number of milkcattle in Bombay is estimated at about 20,000 the majority of which (over 17,000) are buffaloes. There are 86 licensed milkcattle stables and about 65 dairies and nearly 800 milk-shops in Bombay. The exact amount of milk daily consumed in Bombay is not known: it may be roughly estimated at about 4,000 maunds or 240,000 pounds.

3. The *amount* of milk yielded by Indian cows and buffaloes was found to depend upon a variety of factors, such as breed, the kind of food, season, etc. For instance, the "*Delhi*" breed of buffaloe and the "*Sindhi*" cow were found to yield the larger amount of milk, the average being over 4,000 and 2,000 pounds per year respectively.

4. The *quality* of milk (including the bacterial content) was found to be affected by the following main factors:—(*a*) *Climatic influences, e. g.* temperature, humidity, season, time of day, etc.; (*b*) *factors relating to milkcattle, e. g.*, the breed, heredity, age, health of the animal, time of calving, the kind of fodder, conditions of the stables and sheds, etc.; (*c*) *conditions ascribed to Gowlis* (Milk-men), *e. g.*, filthy habits of life, undesirable customs, objectionable methods of milking and transporting milk to customers, diseases affecting the milk-men which may be communicated through the milk, *e. g.*, Typhoid, Cholera, Tuberculosis, etc.

5. It has been found that the chemical composition of milk in India differs to a great extent from that in Europe and America.

Buffaloes' milk which is very largely used here, is richer in fats and proteids than cows' milk abroad. Most of the Indian breeds of cows, yield milk which contains a higher amount of fat than is usually found in the milk of European or American breeds. This is at least the case in Bombay and Western India. The following is the average composition of Bombay Milk obtained from a variety of sources:—

	No. of samples examined.	Total Solids per cent.	Fat per cent.	Non-fatty solids per cent.	Specific Gravity at 60° F.
1. Buffaloes' Milk—					
Series I	271	17·11	7·62	9·57	1,028·8
„ II	205	17·40	7·87	9·53	1,030
2. Cows' Milk	50	14·89	5·79	9·10	1,029

The above samples were mostly of "Mixed" milk. Great variations were found in individual animals and the lowest limits were noted for the purpose of fixing a chemical standard.

6. With regard to the adulteration of milk with water, it has been found that about 79 per cent. of the samples examined or about *four-fifth of the milk* supplied to Bombay *was adulterated* with water.

7. The amount of water added was found to bear an inverse ratio to the price charged for milk, that is, the lower the price, the greater the adulteration proportionately and *vice versa.*

8. It is almost impossible to get genuine milk in Bombay for less than 4 annas per seer (this is equal to about 6½ pence per quarter). This rate is considerably higher than that prevailing in many large European and American Cities, and unless there is a vast improvement in the present methods of production and distribution of milk, the price is likely to remain high.

9. The milk samples examined *bacteriologically* may be divided into *three classes*:—

Class I.—Samples taken from healthy cows and buffaloes which were specially brought to the Municipal Laboratory. These were collected under the strictest personal supervision and examined *immediately* after collection.

Class II.—Samples collected in sterile bottles by the Veterinary Inspectors with ordinary precautions and examined three or four hours after collection.

Class III.—Samples bought at random from various sources in the City from cattle-stables, dairies, railway stations, milk-shops, individual vendors and hawkers. This represents the ordinary market milk of Bombay.

10. The milk samples were examined as follows:—

Enumeration of microbes per c.c.

Lactose Fermenters in dilutions of 1:10 to 1:1,000,000.

Microscopic examination of the centrifugalised sediment including search for Leucocytes, pus cells, streptococci and staphylococci.

Examination for Tubercle Bacilli including animal experiments.

Cultural and other tests for B. Typhosus, Cholera vibrio, B. Coli communis and B. Enteritides Sporogenes.

11. In samples of class I, the results obtained were almost ideal. The average number of microbes was 396 per c.c.; lactose fermenters were absent in 1 c.c. and less of milk and the examination for pathogenic microbes was negative in all cases.

12. 68 samples of class II were examined with the following results:—

(*a*) *Microbes per c.c.* (average of 68 samples) were 17 millions; (*b*) *Laetose fermenters,* only four samples or 5·9 per cent. showed their presence in a dilution of 1 in a million; (*c*) *Streptococci* were detected only in two samples; while (*d*) *B. Coli* in 24 samples or in about 35 per cent. samples; (*e*) examination for other microbes was negative.

These results compare favourably with those obtained in class III q.v.

13. 240 samples of class III were examined with the following results:—

(a) *Microbes per c. c.* The average was about 36 millions.

(b) *Lactose Fermenters.* In 75·8 per cent. samples they were present in dilution of 1 in a million.

(c) *Streptococci* were detected in 11·7 per cent.

(d) *B. Coli* was present in 93·7 per cent., *other microbes* were absent.

These results are extremely bad when compared with those of class II.

14. These widely different results of the bacteriological examination are mainly dependent on (a) the different *conditions of collection and distribution* of the milk samples, (b) the *time* elapsing between milking and examination of the samples at the Laboratory and (c) the *temperature* at which the milk samples were held.

15. The favourable results obtained in samples of Class I from a bacterial stand-point, show that it is *quite possible to get the purest and cleanest milk* in Bombay, provided that proper precautions are taken regarding milking, etc.

16. The results of bacteriological examination of samples of Class II indicate that even with ordinary precautions, a great deal of the objectionable contamination of milk can be avoided.

17. As regards the results obtained in samples of Class III, it is quite evident that this means *a very high degree of manurial and other undesirable pollution of the Bombay Milk Supply.* This series included several samples of milk which were quite *genuine* as regards their *chemical composition* being free from adulteration with water; but a bacteriological examination revealed much *contamination* with filth, and cow-dung!

18. As regards *Tuberculosis,* out of 741 samples of milk examined during four years not a single sample showed the presence of Tubercle Bacilli. These results have been since confirmed, independently, at the Bombay Bacteriological Laboratory, Parel, where similar results were obtained. It may be concluded that so far as our present knowledge goes *Tuberculosis is rarely, if at all, conveyed by milk in India.*

19. The above investigation has demonstrated the *practical importance of the Bacterial examination of milk* in India. It cannot be denied that much valuable information can be obtained from a bacteriological examination of milk.

20. It is also evident from the above that *Bombay Milk shows an extremely high degree of adulteration with water and a most objectionable pollution from a bacterial point of view.*

21. The question of *milk standards for India* has been studied from various points of view. These would be necessarily different from those used in Europe and America. The standard proposed below for Bombay and Western India is based upon the analytical results of about five hundred "Genuine" samples of milk collected in Bombay under the most varying conditions and many hundreds of samples examined in Poona. This standard has been more or less approved by most Analysts and Agricultural Chemists in India.

Proposed Milk Standard, (Chemical), for Bombay and Western India.

	Fat per cent.		Non-fatty, Solids, per cent.	
	Average.	Lowest legal limit.	Average.	Lowest legal limit.
Buffaloes' Milk	6·5 to 7·5	5	9 to 9·5	8·5
Cows' Milk...	4 to 5	3·5	8·5 to 9	8·0

The lowest limits proposed are meant only for *legal* purposes hence they have been kept as low as possible—ordinarily, however, milk in Western India should show the figures mentioned under "Average." If one uniform standard for the whole of India, is considered to be desirable, the above standard with a slight modification may be adopted. I think, however, that for various reasons, it would be best to adopt *local milk standards* for the different cities and districts where similar conditions of climate, breed, etc., prevail.

22. As regards *Bacterial Standards for milk*, it may not be considered desirable at present to adopt them for *legal* purposes but undoubtedly they would be very useful as guides for *administrative* purposes. Besides, the present bacteriological investigation is probably the *first* one of its kind in India and further research would be necessary in other parts of India before a definite standard can be arrived at. In the meantime in the light of the results already obtained in Bombay the following *Bacterial standard for Bombay Milk* is suggested as a provisional measure :—

(*a*) *Microbes per c. c.* These should not exceed two millions in the cold weather (November to March) and five millions during the hot and rainy seasons (April to October) ; (*b*) *Lactose Fermenters.* They should be absent in a dilution of 1 : 100 in the cold season and 1 : 1000 during the other seasons ; (*c*) *Microscopic examination of the sediment* should show only a few leucocytes and perhaps a few cocci and bacilli, but pus cells and (pathogenic) streptecocci should be always absent ; (*d*) *pathogenic microbes e.g.*, Tubercle Bacilli, Cholera vibrio, B. Typhesus, etc., should be always absent.

23. The comparatively favourable bacterial results obtained in samples of milk, which were pasteurised and then kept constantly at a temperature under 50°F, demonstrate the advantages of pasteurised milk over raw milk.

In order to complete the study of Bombay milk, a start has been made in making observations on the *enzymes* of milk—particularly *catalase* and *peroxidase.*

In addition to the research work 269 samples of milk were examined chemically for *legal* purposes. This work is likely to increase considerably during the coming year (1915) and unless there is some increase in the present Laboratory staff, further research work may have to be given up. Inspite of the "temporary extension", we still need more space to meet the increased work of the Laboratory particularly a balance room and a store room are urgently needed.

The total number of samples examined and tests performed during the year under review greatly exceed those of any previous year, and the year 1914 easily constitutes a *record year* in the history of the Bombay Municipal Laboratory, both with regard to the *amount* as well as the *quality* of useful work done.

I am glad once more to record my great appreciation of the excellent work done by the entire Laboratory Staff—particularly the able assistance rendered in my research work by Messrs. Gupte, Pansare, and Nadkarni.

I have the honour to be,

Sir,

Your most obedient servant,

LEMUEL LUCAS JOSHI, M.D., B.SC., D.T.M., F.C.S.,

Municipal Analyst.

STATEMENT SHOWING THE NUMBER OF ARTICLES EXAMINED CHEMICALLY DURING THE YEAR 1914.

Sent by	Milk.	Butter.	Ghee.	Oils.	Flour.	Bread.	Sauce.	Honey.	Vinegar.	Wine.	Tea.	Coffee.	Aerated Waters.	Bombay Waters.	Well and Tank Waters.	Storage Tank Waters.	Rain Water Tank.	Waters.	Glycerine.	Fats.	Disinfectants.	Bone sinews.	Lime.	Lead.	Akonia.	Cement.	Mortar.	Hydrochloric acid.	Sulphur.	Kerosine oil.	Yellow oil.	Pit.	"Jar".	Soap.	Urine.	TOTAL
Health Officer	3	..	..	..	..	..	..	..	..	..	15	..	1	..	..	..	..	..	..	7	..	1	..	..	..	..	..	3	2	..	..	..	..	..	..	32
Municipal Analyst	217	3	7	..	..	..	..	..	..	..	..	..	..	261	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	490
Dy. Health Officer A	35	..	..	16	27	..	..	..	..	..	9	3	1	..	58	5	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	158
" " B	31	..	..	2	23	..	..	..	..	..	7	..	..	..	33	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	96
" " C	34	..	1	4	..	..	..	..	..	..	..	1	..	..	106	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	146
" " D	41	..	2	10	1	2	..	..	..	..	6	2	3	2	53	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	123
" " E	59	1	..	2	..	..	..	..	..	..	5	..	..	..	13	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	82
" " F	25	..	5	7	9	..	..	1	1	..	11	4	1	..	7	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	74
" " G	30	..	..	7	9	..	..	..	1	..	4	3	1	..	22	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	77
Spl. Asst. H. O. Malaria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Supdt. of Licenses	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	12
" Markets	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Municipal Storekeeper	..	..	..	30	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	31
Hydraulic Engineer	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	7
Executive Engineer	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	3	..	..	2	..	1	..	..	..	8
Spl. Asst. H. O. Arthur Road Hospital	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Private	3	..	..	1	..	..	..	..	..	1	..	..	..	..	2	..	..	10	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	482	501
Total ..	486	4	15	79	69	2	2	1	2	1	57	13	7	263	295	6	4	12	1	12	1	1	8	1	1	1	3	3	2	2	1	1	1	1	483	1,841

STATEMENT SHOWING THE NUMBER OF MILK SAMPLES EXAMINED CHEMICALLY DURING THE YEAR 1914.

Sent by	Genuine.	Fair and good.	Doubtful purity.	Not genuine.	Special samples.	Total.	REMARKS.
Executive Health Officer ..	..	..	..	3	..	3	
Municipal Analyst	..	..	..	..	217	217	For special work.
Deputy Health Officer A ..	15	2	4	14	..	35	
Do. do. B ..	13	..	1	17	..	31	
Do. do. C ..	25	..	1	8	..	34	
Do. do. D ..	18	1	2	20	..	41	
Do. do. E ..	26	2	1	30	..	59	
Do. do. F ..	5	..	..	20	..	25	
Do. do. G ..	8	..	..	22	..	30	
Superintendent of Licenses..	..	..	..	....	..	8	For % of Fat.
Private	2	..	..	1	..	3	
Total ..	112	5	9	135	217	486	
		261					

STATEMENT SHOWING THE NUMBER OF GHEE SAMPLES EXAMINED DURING THE YEAR 1914.

Sent by	Genuine.	Fair.	Not genuine.	Special samples.	Total.	REMARKS.
Municipal Analyst	....	....	....	7	7	
Deputy Health Officer C	....	1	....	....	1	
Do. do. D	1	....	1	....	2	
Do. do. F	3	....	2	....	5	
Total ..	4	1	3	7	15	

STATEMENT OF WELL WATERS EXAMINED DURING 1914.

Serial No.	Sent by	Well situated at	Opinion as to Potability.
1	Malaria Inspector, A Ward ..	23–25, Bhoiwar Lane	Unfit.
2	Do. do. A do. ..	80, Ghogha Street	,,
3	Do do. A do. ..	24–28, Parsee Bazar Street	Fit.
4	Do. do. A do. ..	14–16, Parsee Punch Lane	Unfit.
5	Do. do. A do. ..	46–48, Gunbow Street	Fit.
6	Do. do. A do. ..	38, do.	,,
7	Do. do. A do. ..	12, Pitha Street common to 14–16..	Unfit.
8	Do. do. A do. ..	335–341, Hornby Road	Fit.
9	Do. do. A do. ..	Road Side, Pitha Street	,,
10	Do. do. A do. ..	Do. Cawasji Patel Street	,,
11	Do. do. A do. ..	11, Cowasji Patel Street	Fair.
12	Do. do. A do. ..	Road Side, Cawasji Patel Street near Gunbow Street.	Unfit.
13	Do. do. A do. ..	13A (Agiari), Hornby Road..	Fit.
14	Do. do. A do. ..	130 (,,), Cawasji Patel Street	,,
15	Do. do. A do. ..	311 (,,), Hornby Road..	Objectionable.
16	Deputy Health Officer, G do. ..	664H, Lady Jamsetji Road	Suspicious.
17	Malaria Inspector, D do. ..	30, Mangalvadi	Objectionable
18	Do. do. D do. ..	5A & 5, do.	Suspicious.
19	Do. do. C do. ..	1, Fish Market, public passage	Fit.
20	Do. do. C do. ..	36, Sonapur Street	Objectionable.
21	Do. do. D do. ..	1, Queen's Road	Unfit.
22	Do. do. D do. ..	5 & 5A, Mangalvadi	,,
23	Do. do. C do. ..	11, II Sonapur Lane	,,
24	Do. do. C do. ..	77, do. Street	,,
25	Do. do. D do. ..	33–36, Khataralli	Fair.
26	Do. do. B do. ..	39–43, Old Hanuman Lane..	Objectionable.
27	Do. do. D do. ..	16, Khetwadi 7th Lane	Unfit.
28	Do. do. D do. ..	260 (7), Girgaum Back Road	Objectionable.
29	Do. do. B do. ..	42–54, Vithalwadi	Unfit.
30	Do. do. B do. ..	10–16, Ovalwadi	,,
31	Do. do. A do. ..	311, Agiari, Hornby Road	Suspicious.
32	Do. do. E do. ..	145A, Haines Road	Unfit.
33	Do. do. E do. ..	348–370, Parel Road	,,
34	Do. do. D do. ..	514–516, Tardeo Road	Fit.
35	Do. do. D do. ..	502–502A, do.	Unfit.
36	Do. do. B do. ..	2–4, Cazi Sayad Street	,,
37	Do. do. D do. ..	2, Warden Road	,,
38	Do. do. D do. ..	53, do.	,,
39	Deputy Health Officer, G do. ..	678C, Kumbhargalli	,,
40	Do. do. F do. ..	98 & 98 A & A, Elphinstone Road	,,

Serial No.	Sent by	Well situated at	Opinion as to Potability.
41	Malaria Inspector, B Ward ..	87–91, Vithalwadi	Suspicious.
42	Do. do. B do. ..	1, Vithoba Lane	,,
43	Do. do. B do. ..	31–33, Dhanji Street	,,
44	Do. do. C do. ..	26, III Bhoiwada	Unfit.
45	Do. do. C do. ..	24–26, New Vadi	,,
46	Do. do. C do. ..	10, Panjrapole Road	,,
47	Do. do. D do. ..	1–3, Warden Road	,,
48	Do. do. D do. ..	6A, do.	,,
49	Do. do. D do. ..	524–526, Tardeo Road	,,
50	Do. do. D do. ..	12–14, Harkness Road	,,
51	Do. do. B do. ..	58–60, Vithalwadi	Objectionable
52	Do. do. D do. ..	23, 24, 25, 26, Borbhat Lane	Unfit.
53	Do. do. D do. ..	28, Nepean Sea Road	Fair.
54	Do. do. E do. ..	Hospital Lane, in Railway Lines	Unfit.
55	Do. do. E do. ..	15–27, B. Range	Fair.
56	Deputy Health Officer, G do. ..	1103E, Furgusson Road	Unfit.
57	Do. do. F do. ..	7, Dadar Road	,,
58	Malaria Inspector, A do. ..	8 and 10, Barber Lane	,,
59	Do. do. C do. ..	27–29, Thakurdwar Road	,,
60	Deputy Health Officer, G do. ..	649A, Portuguese Church Street	,,
61	Malaria Inspector, D do. ..	18, Borbhat Lane	Objectionable.
62	Do. do. A do. ..	75, Gunbow Street	Suspicious.
63	Deputy Health Officer, G do. ..	675, Kumbhar Lane	Fair.
64	Malaria Inspector, D do. ..	12–14, Nepean Sea Road	Fit.
65	Do. do. A do. ..	4, Pitha Street	,,
66	Do. do. B do. ..	468, 476, Abdul Rehman Street	Unfit.
67	Do. do. B do. ..	44-46, Champavadi	Fit.
68	Do. do. C do. ..	10–11, Khataralli	Unfit.
69	Do. do. A do. ..	14–16, Barber Lane	Fit.
70	Do. do. C do. ..	14–16, Wellington Street	Unfit.
71	Deputy Health Officer, G do. ..	56, Mahim Custom Road	,,
72	Do. do. G do. ..	33–35, Mahim Custom Road	Objectionable.
73	Malaria Inspector, B do. ..	514–516, Shaik Memon Street	Unfit.
74	Do. do. B do. ..	33–35, Shamshet Street	,,
75	Do. do. A do. ..	38, Ghogha Street	,,
76	Do. do. C do. ..	404–406, Kalbadevi Road	Fair.
77	Do. do. A do. ..	67–69, Cawasji Patel Street..	Unfit.
78	Do. do. C do. ..	90–96, Fanasvadi	,,
79	Deputy Health Officer, G do. ..	454, D'Lisle Road	,,
80	Malaria Inspector, C do. ..	491, Girgaum Road	,,
81	Deputy Health Officer, G do. ..	196 AA, Worli Pakadi Road	,,

Serial No.	Sent by	Well situated at	Opinion as to Potability.
82	Malaria Inspector, B Ward ..	19–21, Jambulvadi	Unfit.
83	Do. do. C do. ..	57, New Vadi	Objectionable.
84	Deputy Health Officer, G do. ..	190–191, Worli Pakadi Road	Unfit.
85	Malaria Inspector, C do. ..	6, Kumbhar Lane	,,
86	Do. do. A do. ..	74–78, Gunbow Street	Suspicious.
87	Do. do. A do. ..	70–72, do.	Unfit.
88	Deputy Health Officer, G do. ..	358 B & C, New Matunga Road	Objectionable.
89	Do. do. G do. ..	406, Mahim Custom Road	Fair.
90	Malaria Inspector, C do. ..	3, Maruti Lane Fulgalli	Unfit.
91	Deputy Health Officer, G do. ..	481, Mahim Agar New Parbhadevi Road.. ..	,,
92	Malaria Inspector, C do. ..	404, 408, Girgaum Road	,,
93	Do. do. C do. ..	63–65, Dadishet Agiari Street	,,
94	Deputy Health Officer, G do. ..	677F, Kumar Galli	Fit.
95	Malaria Inspector, C do. ..	407–409, Girgaum Road	,,
96	Do. do. D do. ..	7, Borbhat Lane	Objectionable.
97	Do. do. A do. ..	39, Pitha Street	Unfit.
98	Do. do. A do. ..	201–207, Modi Street	Objectionable.
99	Do. do. C do. ..	8, Dhusvadi	Unfit.
100	Do. do. B do. ..	148–162, Cazi Sayad Street	,,
101	Do. do. D do. ..	37, Mugbhat Lane	Fit.
102	Do. do A do. ..	48–50, Cawasji Patel Street..	,,
103	Do. do. D do. ..	23, Khataralli	Unfit.
104	Do. do. C do. ..	289–91, 293, Girgaum Road	Objectionable.
105	Do do. A do. ..	7–9, Nanabhai Lane	Fit.
106	Do. do. B do. ..	92–96, Chakla Street	Suspicious.
107	Do. do. D do. ..	134A, Girgaum Road	Fair.
108	Do. do. C do. ..	4, Kumbhar Lane	Unfit.
109	Do. do. B do. ..	2, Dongri Street	Objectionable.
110	Do. do. A do. ..	13, Nanabhai Lane	Suitable.
111	Do. do. D do. ..	24–AC, Bentam Hall Lane	Fair.
112	Do. do. A do. ..	7, Nanabhai Lane	Fit.
113	Do. do. C do. ..	47, New Vadi	Suspicious.
114	Do. do. D do. ..	9, Charni Road	Unfit.
115	Do. do. C do. ..	11, II Khataralli	Suspicious.
116	Do. do. A do. ..	311 (Agiari), Hornby Road	Fit.
117	Do. do. C do. ..	14 (A), Dhusvadi	Objectionable.
118	Do. do. D do. ..	120–140, Mugbhat Lane	Unfit.
119	Do. do. A do. ..	10, Nanabhai Lane	,,
120	R. P. Masani, Esq., M.A.	Well at Versova (Mr. B. N. Karani)	Objectionable.
121	Malaria Inspector, D Ward ..	32, Khetwadi 6th Lane.	Unfit.
122	Do. do. C do. ..	52–54, II Fanaswadi..	,,

Serial No.	Sent by	Well situated at	Opinion as to Potability.
123	Malaria Inspector, C Ward ..	19–21, New Vadi	Objectionable.
124	Do. do. A do. ..	80, Ghogha Street	Unfit.
125	Deputy Health Officer, F do. ..	4, Suparibag Road, Parel	,,
126	Malaria Inspector, D do. ..	512, Tardeo Road	,,
127	Do. do. A do ..	7–9, Cawasji Patel Street	,,
128	Do. do. D do. ..	29, Warden Road	,,
129	Do. do. D do. ..	1 (a) do.	Fair.
130	Do. do. A do. ..	11–13, Cawasji Patel Street..	Fit.
131	Do. do. C do. ..	245, 247, 249, 51, Girgaum Road	Unfit.
132	Do. do. C do. ..	57, Cavel Street	,,
133	Do. do. C do. ..	3–5, (1–8–9–17), Chandanvadi	,,
134	Do. do A do. ..	138, Cawasji Patel Street	,,
135	Do. do C do. ..	44 (1), Cavel	,,
136	Do. do. C do. ..	278–80, Kalbadevi Road	,,
137	Do. do. C do. ..	8–10, New Vadi	,,
138	Do. do. C do. ..	21, Kumbhar Lane	,,
139	Do. do. A do. ..	24, Ghogha Street	,,
140	Do. do. C do. ..	17, Dadi Santoke Lane	,,
141	Do. do. A do. ..	303, Hornby Road	Fit.
142	Engineer, G. I. P. Ry.	At Amla Station	,,
143	Malaria Inspector, A Ward ..	26, Ghogha Street	Unfit.
144	Do. do. C do. ..	38–40, 2nd Fanaswadi	,,
145	Do. do. A do. ..	12, Cawasji Patel Street	Suitable.
146	Do. do. C do. ..	48–50, 2nd Fanasvadi Street	Objectionable
147	Do. do. A do. ..	29, Pitha Street	Fit.
148	Do. do. A do. ..	15–19, Cawasji Patel Street..	Suspicious.
149	Do. do. C do. ..	2–3, common to 4–5, Bhasker Lane	Unfit.
150	Do. do. A do. ..	114, Cawasji Patel Street	Fit.
151	Do. do. D do. ..	751, Girgaum Road	Unfit.
152	Do. do. A do. ..	152, Gunbow Street	,,
153	Do. do. A do. ..	8, Nanabhai Lane	,,
154	Deputy Health Officer G do. ..	110, Worli Pakadi Street	,,
155	Do. do. G do. ..	626, Portuguese Church Street	Fair.
156	Do. do. G do. ..	202, Dharavi Road	Unfit.
157	Malaria Inspector, B do. ..	112, Hari Joshi Vadi	,,
158	Do. do. C do. ..	10, Dhusvadi	Objectionable.
159	Deputy Health Officer, G do. ..	189, Worli Pakadi Road	Unfit.
160	Do. do. B do. ..	26–28, Champa Vadi	Fair.
161	Malaria Inspector, C do. ..	Bhangvadi	Unfit.
162	Do. do. C do. ..	3, Fanasvadi Cross Lane	,,
163	Do. do. C do. ..	46–48, New Wadi	,,

Serial No.	Sent by	Well situated at	Opinion as to Potability.
164	Malaria Inspector, B Ward ..	78–82, Vithal Vadi	Fair.
165	Do. do. C do. ..	9, II Khateralli	Unfit.
166	Do. do. B do. ..	24–26, Vithoba Lane..	"
167	Do. do. C do. ..	38, Cavel	"
168	Do. do. C do. ..	19, 21, II Fanasvadi	"
169	Do. do. A do. ..	70–72, Cawasji Patel Street..	Fair.
170	Do. do. C do. ..	5, New Vadi	Unfit.
171	Do. do. B do. ..	13, Old Hanuman Cross Lane	Fair.
172	Do. do. C do. ..	111, Fanasvadi Street	Unfit.
173	Do. do. C do. ..	181–185, Girgaum Road	Objectionable.
174	Do. do. B do. ..	25, Telwadi	Fair.
175	Do. do. C do. ..	64–66, Carpenter Street I	Unfit.
176	Do. do. D do. ..	49A, Banganga	"
177	Do. do. D do. ..	6–7, Bhatvadi Lane	"
178	Do. do. B do. ..	93, Dhanji Street	"
179	Do. do. C do. ..	25 (a), Fanasvadi Street	Suspicious.
180	Do. do. D do. ..	6–7, I Damar Lane	Unfit.
181	Do. do. B do. ..	124, Old Hanuman Lane	"
182	Do. do. B do. ..	154, New do.	Objectionable.
183	Do. do. A do. ..	175, Hornby Road	"
184	Do. do. C do. ..	9, Nowroji Street	"
185	Do. do. C do. ..	438, Girgaum Road	Unfit.
186	Do. do. B do. ..	4–6, Dhanji Street	Objectionable.
187	Do. do. C do. ..	288–290, Girgaum Road	Unfit.
188	Do. do. C do. ..	11, Ardeshir Dady Cross Lane	"
189	Do. do. C do. ..	31–33, Sonapur Street	"
190	Do. do. A do. ..	41—43, Ghogha Street	Fair.
191	Do. do. C do. ..	16, Anantwadi	Unfit.
192	Do. do. C do. ..	31–33, II Fanaswadi	Objectionable
193	Do. do. C do. ..	20, Anantwadi	"
194	Do. do. C do. ..	29, do.	Unfit.
195	Do. do. A do. ..	13–15, Modi Street	Fit.
196	Do. do. C do. ..	3, II Fanasvadi	Fair.
197	Do. do. C do. ..	79–91, Thakurdwar Road	Objectionable.
198	Do. do. E do. ..	69, Mazagon Road (N.-W.)	Suspicious.
199	Do. do. C do. ..	41, Popatwadi	Unfit.
200	Do. do. E do. ..	35, Parel Road	"
201	Do. do. E do. ..	38, Mount Road	"
202	Do. do. E do. ..	6, 7, 8, Hansraj Lane	Fair.
203	Do. do. C do. ..	20–22, New Vadi	Fit.
204	Do. do. A do. ..	14, 16, 18, Police Court Lane	Unfit.

Serial No.	Sent by	Well situated at	Opinion as to Potability.
205	Malaria Inspector, C Ward ..	31, New Vadi	Unfit.
206	Do. do. B do. ..	19, Agiari Cross Lane	Suspicious.
207	Do. do. B do. ..	229–31, Kalbadevi Road	Objectionable.
208	Do. do. C do. ..	8, Anantwadi	,,
209	Do. do. C do. ..	114–116, Kalbadevi Road	Unfit.
210	Do. do. C do. ..	67, Chandanwadi	Objectionable.
211	Do. do. D do. ..	36/38, Nepean Sea Road	Fair.
212	Do. do. C do. ..	10/12 Parsee Agiari Street, ...	Objectionable.
213	Do. do. C do. ..	39, II Fanaswadi	Unfit.
214	Do. do. D do. ..	Arya, Samaj Kakadwadi	Objectionable.
215	Do. do. C do. ..	14, Kolivadi	Fair.
216	Do. do. C do. ..	49, New Vadi	Unfit.
217	Do. do. C do. ..	13–14, Cavel	Suspicious.
218	Do. do. D do. ..	799–807, Girgaum Road	Fit.
219	Do. do. C do. ..	15, Cavel	Fair.
220	Do. do. D do. ..	79 (2—6), Charni Road	Unfit.
221	Do. do. D do. ..	9, Shenviwadi	Fit.
222	Do. do. D do. ..	6–10–11, Queen's Road	Unfit.
223	Deputy Health Officer, G do. ..	659C, Lady Jamsetji Road	,,
224	Malaria Inspector, D do. ..	24–25, Lamington Road	,,
225	Do. do. D do. ..	24, VII Khetwadi Lane	,,
226	Do. do. C do. ..	5–6, II Sonapur Cross Lane	,,
227	Do. do. C do. ..	86, Fanaswadi	,,
228	Do. do. B do. ..	189–203, Kalbadevi Road	,,
229	Do. do. D do. ..	8–10, Harkness Road	,,
230	Do. do. C do. ..	2–3, Kumbhar Lane	,,
231	Do. do. C do. ..	53, Cavel	,,
232	Do. do. C do. ..	12, Anantvadi	Objectionable.
233	Do. do. C do. ..	244, Girgaum Road	Unfit.
234	Do. do. D do. ..	82, Kandevadi	,,
235	Do. do. B do. ..	27, 29, Kazi Sayad Street	,,
236	Do. do. A do. ..	12–14, Gola Lane	Fair.
237	Do. do. D do. ..	84–90, Thakurdwar Road	Objectionable.
238	Do. do. C do. ..	53–55, Fanasvadi	Unfit.
239	Do. do. C do. ..	11, Dhasvadi	Objectionable.
240	Do. do. C do. ..	59–61, III Marine Street	Unfit.
241	Do. do. C do. ..	6, Hurgovan Desai Vadi	Suspicious.
242	Do. do. D do. ..	1–3, Mugbhat Lane	Fit.
243	Deputy Health Officer, G do. ..	67–69, Mahim Custom Road	,,
244	Malaria Inspector, E do. ..	108–110, D'Lisle Road	Unfit.
245	Do. do. E do. ..	Do. do.	,,

Serial No.	Sent by	Well situated at	Opinion as to Potability.
246	Malaria Inspector, C Ward ..	14–15, Karelvadi	Unfit.
247	Do. do. C do. ..	88, Cavel	,,
248	Do. do. C do. ..	23, Anantvadi	,,
249	Do. do. A do. ..	25–27, Bomanji Street	,,
250	Do. do. C do. ..	126, Kalkadevi Street	Objectionable.
251	Do. do. C do. ..	376-82, Girgaum Road	Unfit.
252	Do. do. D do. ..	2, Babulnath Road	Fit.
253	Do. do. C do. ..	14–15, Karelvadi	Fair.
254	Do. do. B do. ..	31-37, Old Hanuman Lane	Suspicious.
255	Deputy Health Officer, F do. ..	1110 K, Matunga Agarvada	Unfit.
256	Malaria Inspector, D do. ..	2, Mathew Road	,,
257	Do. do. C do. ..	72–78, Thakurdwar Road	,,
258	Do. do. A do. ..	14, Nanabhai Lane	,,
259	Do. do. C do. ..	108, Sonapur Street	Objectionable.
260	Do. do. C do. ..	202, 204, Girgaum Road	Unfit.
261	Do. do. A do. ..	85, Cawasji Patel Street	Objectionable.
262	Do. do. C do. ..	123, Cavel	,,
263	Do. do. A do. ..	19, Nanabhai Lane	Unfit.
264	Do. do. D do. ..	414, Grant Road	,,
265	Deputy Health Officer, F do. ..	1066, Matunga Agar Vada	,,
266	Malaria Inspector, A do. ..	19–21, Ghogha Street	,,
267	Do. do. D do. ..	16, Thakurdwar Road	,,
268	Do. do. C do. ..	2, II Fanaswadi	,,
269	Deputy Health Officer, G do. ..	78, Mahim Cross Lane	,,
270	Malaria Inspector, C do. ..	178–180, Kika Street	,,
271	Do. do. E do. ..	9, Dockyard Road	Fair.
272	Do. do. C do. ..	198–200, Kika Street	Unfit.
273	Do. do. B do. ..	98–108, D'Souza Street	,,
274	Do. do. C do. ..	22, II Pophalvadi	,,
275	Do. do. C do. ..	92–94, Dadishet Agiari Street	Objectionable.
276	Do. do. B do. ..	165–181, New Hanuman Lane	,,
277	Do. do. C do. ..	12, Dhusvadi	Unfit.
278	Do. do. C do. ..	83–93, Fanaswadi Street	Fair.
279	Do. do. E do. ..	407–423, Duncan Road	Unfit.
280	Do. do. A do. ..	52–54, Bomanji Lane	Fit.
281	Do. do. C do. ..	2, Ladvadi Lane	Unfit.
282	Do. do. D do. ..	2, 2A, Gowalia Tank Road	Fit.
283	Do. do. B do. ..	47, Cazi Sayad Street	Unfit.
284	Do. do. C do. ..	17, Cavel	,,
285	Deputy Health Officer, G do. ..	106, Mahim Cross Lane	Very suspicious.
286	Malaria Inspector, E do. ..	5–6, Arab Lane	Unfit.

Serial No.	Sent by	Well situated at	Opinion as to Potability.
287	Deputy Health Officer, F Ward ..	1225, Parel Tank Road	Suspicious
288	Do. do. F do. ..	1427, Parel Village	Fair.
289	Malaria Inspector, C do. ..	49–51, III Bhoivada X Lane	Unfit.
290	Spl. A. H. O., Malaria	136–138, Mint Road	,,
291	Malaria Inspector, A Ward ..	238, Bora Bazar Street	Fair.
292	Do. do. D do. ..	4–8, Ovalvadi	Objectionable.

STATEMENT OF TANK WATERS EXAMINED DURING 1914.

Serial No.	Sent by	Tank situated at	Opinion as to Potability.
1	Malaria Inspector, C Ward ..	513 (6), Girgaum Road	Unfit.
2	Do. do. C do. ..	Bhagirathi Tank	,,
3	Do do B do. ..	49–51, Mumbadevi Tank	Objectionable.

STATEMENT SHOWING THE NUMBER OF SAMPLES EXAMINED BACTERIOLOGICALLY, OTHER THAN WATERS, DURING THE YEAR 1914.

Sent by	Milk.												Glycerinated Vaccine.	Sputum.			Swab for Diphtheria.	Sputum for Streptococci.	Blood.						Urine.		Meat for tape-worm.	Aerated water for typhoid.	Oysters.	Rice for Cholera.	Rat and Mice bacillus.	Guinea-pigs for plague experiments.	Stools.	Stools for Cholera.	Disinfectants.	Otorrhœal discharge.	Total.
	Tubercle.	Streptococci.	Staphylococci.	Other Microbes.	Leucocytes.	Microbes per c. c.	Lactose Fermenters.	B. Typhosus.	B. E. Sporogenisis.	Cholera vibrio.	B. Coli.	Diphtheria.		Tubercle.	Pneumonia.	B. Pestis.			Plague.	Typhoid.	Relapsing fever.	Malaria.	Trypanosomiasis.	Septicæmia Hæmorrhagica.	Gonorrhœa.	Tubercle bacilli.											
Dy. Health Officer A	16	16	16	16	16	16	16	31	16	17	16	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	193
" " B	30	20	20	20	20	20	20	40	20	22	20	..	..	..	2	2	..	..	..	..	..	..	..	...	..	..	...	..	..	1	..	14	..	..	..	..	271
" " C	15	15	15	15	15	15	15	36	15	21	15	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	20	..	..	..	..	213
" " D	14	14	14	14	14	14	14	51	14	16	14	..	..	..	..	..	..	..	2	..	2	2	..	..	..	..	..	..	..	..	..	4	..	..	..	..	203
" " E	22	22	22	22	22	22	22	72	22	31	22	..	..	..	...	..	8	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	311
" " F	30	12	12	12	12	12	12	17	12	13	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	..	..	161
" " G	24	12	12	12	12	12	12	20	12	12	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	78	..	..	2	..	..	..	..	232
Executive Health Officer	1	1	1	1	1	1	1	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	24	3	..	..	..	..	8	..	2	8	..	..	18	..	74
Municipal Analyst	43	185	185	185	185	161	161	43	161	43	161	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,513
Superintendent of Vaccination	..	..	..	..	..	..	..	..	..	..	..	..	2,448	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,448
Superintendent of Municipal Gardens ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	7
Spl. Asstt. H. O. A. Road Hospital ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	..	1	16
Private	..	..	..	..	..	..	..	..	..	..	..	..	..	16	..	..	..	..	..	2	..	2	..	..	9	1	1	..	..	..	..	..	1	..	..	..	32
Total ..	195	297	297	297	297	273	273	311	273	176	273	1	2,448	16	2	2	10	2	2	2	2	5	24	3	9	1	1	1	86	1	2	54	1	11	25	1	5,674

STATEMENT SHOWING THE NUMBER OF WATER SAMPLES EXAMINED BACTERIOLOGICALLY DURING THE YEAR 1914.

Sent by	Bombay Waters.													Waters Not Specified.						Total.	Remarks.
	Microbes per c. c.	Cholera vibro.	Enteric.	Gartners.	Lactose Fermenters.	B. E. Sporogenisis.	Well water for Typhoid.	Water for Typhoid.	Well water for Cholera vibrio.	Tank water for Cholera vibrio.	Water for Cholera vibrio.	Water for B. Coli.	Tank water for Typhoid.	Microbes per c. c.	Cholera vibrio.	Enteric.	Gartners.	Lactose Fermenters.	B. E. Sporogenisis.		
Deputy Health Officer, A	..	6	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	10	
Do. do. B	..	23	27	..	..	..	..	2	2	..	2	..	..	..	..	..	..	..	..	56	
Do. do. C	..	16	34	..	..	..	2	2	1	1	4	..	..	..	..	..	..	..	..	60	
Do. do. D	1	4	3	1	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	12	
Do. do. E	..	48	61	..	..	..	..	..	..	..	1	..	1	2	2	2	2	2	2	123	
Do. do. F	..	14	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	16	
Do. do. G	..	4	10	..	..	..	..	..	8	..	..	..	..	..	..	..	..	..	..	22	
Municipal Analyst	189	189	189	189	189	189	..	..	..	..	..	..	..	..	..	..	..	..	..	1,134	
Private	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	
Total ..	190	304	325	190	190	190	2	4	12	1	12	1	1	2	2	2	2	2	2	1,434	

STATEMENT SHOWING THE NUMBER OF WATER SAMPLES EXAMINED FOR PATHOGENIC MICROBES AND IN WHICH THE SAME WERE DETECTED DURING THE YEAR 1914.

Cholera.		Enteric.		Gartners.		Lactose Fermenters.		B. E. Sporogenisis.	
I	II	I	II	I	II	I	II	I	II
331	1 *	334	*Nil.*	192	*Nil.*	193 †	182	192	1 ‡

I=Total number of samples examined for Bacteria.

II= „ „ „ „ which showed their presence.

*=Comma bacilli detected and isolated but cultural tests negative; well water sample.

†=Includes one sample of water examined for B. Coli only; ten samples did not show Lactose Fermenters in 5 c. c. of water.

‡=This sample of water, not specified, showed B. E. Sporogenisis, milk test only.

The Annual Report of the Superintendent of Vaccination for 1914.

Superintendent.

I was in charge of the Department throughout the year.

Vaccination Establishment.

The establishment consists of the Superintendent, the Assistant Superintendent, 10 Vaccinators, 5 Clerks, 17 Karkoons, 3 Peons and 15 Coolies.

Vaccine operations with results during 1905-1914.

2. The following Statement gives the number of persons Primarily Vaccinated and Re-vaccinated during 1914 and the preceding nine years, with the number of persons successful and the percentage of success :—

Year.	Primary Vaccinations.			Re-vaccinations.			Total Number of persons vaccinated.		
	Number of persons vaccinated.	Number successful.	Percentage of success.	Number of persons re-vaccinated.	Number successful.	Percentage of success.	Number of persons vaccinated and re-vaccinated.	Number successful.	Percentage of success.
1905	18,777	15,952	84·95	20,571	780	3·79	39,348	16,732	42·52
1906	17,086	15,719	92·00	1,744	178	10·21	18,830	15,897	84·42
1907	16,720	15,355	91·84	1,282	85	6·63	18,002	15,440	85·77
1908	19,122	16,801	87·86	4,633	257	5·55	23,755	17,058	71·80
1909	18,447	16,336	88·56	10,669	116	1·09	29,116	16,452	56·50
1910	17,356	15,371	88·56	23,600	70	·30	40,956	15,441	37·70
1911	19,312	17,819	92·27	18,786	86	·46	38,098	17,905	47·00
1912	20,946	18,878	90·13	17,094	201	1·18	38,040	19,079	50·15
1913	20,877	18,559	88·90	15,189	63	·41	36,056	18,622	51·62
1914	20,207	17,704	87·61	12,243	63	·51	32,450	17,767	54·75

It will be observed that the total number of persons operated upon during the year was 32,450 against 36,066 in 1913, of which 20,207 were Primary Vaccinations, being 670 less than in 1913 and 12,243 were Re-vaccinations, being 2,946 less than in 1913. Out of the Primary, 11,116 were Bombay born and 9,006 out-born compared with 10,741, 10,065 respectively in the last year.

Of the Primary Vaccinations 17,704—were successful, the percentage of success being 87·61 this, however, is raised to 96·09 if 1,783 " Unknown " cases be left out. Of the Re-vaccinations 63 were successful, yielding a percentage of ·51 which, however, is raised to 50·81 if 12,119 "Unknown" cases be excluded. Calculated on the total number of persons vaccinated, the percentage of success works out to 54·75.

Primary Vaccination. Results by Age-periods.

3. The following Table shows the results in Primary Vaccinations by Age-periods :—

Under 1 year.			Between 1 and 6 years.			Above 6 years.			Total results.			Total operations.
Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	
14,669 Ratio per mille of population. 14·98.	570	1,268	2,857	137	411	185	13	104	17,711 Ratio per mille of population. 18·08.	720	1,783	20,214

Vaccination by others than the Vaccination Staff.

4. The subjoined Table shows the vaccinations performed by Private Medical Practitioners, the District Registrars of the Health Department, and the Medical Officers in charge of the two Jails and the Colaba Lunatic Asylum :—

	Primary Vaccinations.							Re-vaccinations.		
	Males.	Females.	Total.	Successful.			Unknown.	Total.	Successful.	Unknown.
				Under 1 year.	1 and 6 years.	All ages.				
District Registrars. ...	3	3	6	4	2	...	...	...	...	...
P. M. Practitioners ...	...	1	1	1	...	...	...	1,026	...	1,026
The two Jails... ...	...	...	...	...	...	...	...	1,604	652	30
Colaba Lunatic Asylum	...	...	...	...	...	...	...	...	...	...

5. Table showing the particulars of Primary and Re-Vaccinations verified by Inspecting Officers :— **Inspection of Vaccinations.**

Total number of persons vaccinated.		Total number inspected.				Percentage of inspection to total number vaccinated.				Percentage of cases found successful to total number inspected.				Percentage of success reported by Vaccinators.	
		By the Superintendent.		By the Asstt. Supdt. and the Head Vaccinator.		By the Superintendent.		By the Asstt. Supdt. and the Head Vaccinator.		By the Superintendent.		By the Asstt. Supdt. and the Head Vaccinator.			
P.	R.	P.	R.	P.	R.	P.	R.	P.	R.	P.	R.	P.	R.	P.	R.
20,207	12,243	S. F. (5,582+123) =5,705	S. F. (28+37) =65	S. F. (7,257+262) =7,519	S. F. (27+33) =60	28·23	·53	37·21	·49	97·84	43·08	96·52	45·00	87·61	·51

6. The Table below shows by months number of calves inoculated, and the number rejected after inoculation owing to sickness ; as also the number of calves scraped for emulsion during the year and the number used for calf-to-arm Vaccination :— **Heifers inoculated, scraped for emulsion, &c.**

HEIFERS.	1914. January.	February.	March.	April.	May.	June	July.	August.	September.	October.	November.	December.	Total.
Number inoculated...	36	30	31	35	41	36	36	34	32	37	35	48	431
Number successful ...	34	29	29	35	41	32	26	30	31	31	27	38	383
Number unsuccessful	...	1	...	...	...	1	7	2	1	...	2	4	18
Number rejected after inoculation owing to sickness	2	...	2	...	...	3	3	2	...	6	6	6	30
Number inoculated for emulsion	23	20	21	21	30	24	25	22	21	24	22	34	287
Number inoculated for calf-to-arm vaccination ...	13	10	10	14	11	12	11	12	11	13	13	14	144

7. The following Statement shows the proceeds from the sale of lymph, the fees realized from vaccination at private places, &c., during the year under report :— **Proceeds from the sale of lymph and from other sources.**

Amount realized by the sale of lymph.	Municipal moiety of the fees from private vaccination.	Municipal fee (moiety only) for vaccination instruction to Medical Students.	Municipal fee for giving vaccination extracts, &c.	Total.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
5,129 2 0	595 12 0	315 0 0	108 10 0	6,148 8 0

8. The cost of each successful vaccine operation including all charges was Rs. 1-11-3 against Rs. 1-8-2 in the preceding year ; if the amount realised by the sale of lymph, by fees for private vaccination, etc., (Rs. 6,148-8-0) be deducted from the total expenditure, the cost works out Rs. 1-5-9. **Cost of single operation.**

9. If calculated on the total number of vaccine operations, the cost of each operation, after deducting the proceeds from the sale of lymph, from private vaccination, etc., comes to Re. 0-11-11.

10. During the year under report 352 certificates of postponement of vaccination of children were granted. **Postponement Certificates.**

11. There were no prosecutions during the year, either for neglect of vaccination, or for neglect of inspection of the result. **Prosecution under the Vaccination Act.**

Work done with different kinds of lymph.

12. The following Table shows the different kinds of lymph used, the operations done with each kind and the comparative results obtained during the year :—

Kind of Lymph.	Number of operations.		Successful cases excluding the "Unknown."		"Unknown" cases.		Percentage of success excluding the "Unknown."	
	P.	R.	P.	R.	P.	R.	P.	R.
(a) Human	...	...	...	...	...	...	...	...
(b) Animal	4,731	1,065	4,288	48	367	977	93·26	54·55
(c) Glycerinated	15,483	11,178	13,423	15	1,416	11,142	95·42	41·67
Total operations ...	20,214	12,243	17,711	63	1,783	12,119	96·09	50·81

Instruction in Vaccination.

13. During the year under report 5 Military Medical pupils, 50 Civil Medical and 8 other Students attended the different Public Vaccine Stations in the City for receiving practical instruction in Vaccination.

Small-pox.

14. During the year under report the total number of deaths reported from Small-pox was 252 as against 212 in the year preceding.

The total number who left Bombay, for the Haj during this period, was 11,922. Of these 9,102 were vaccinated in Bombay before embarkation, *i.e.*, 76·35 per cent.

The following Table shows the number of males and females and the number of Primary Vaccinations and Re-vaccinations performed amongst the Pilgrims by the Special Staff that was engaged for the purpose (*viz.*, 1 Vaccinator, 2 Clerks, 1 Coolie and 1 Nurse).

—	Males.	Females.	Total.
Primary Vaccinations	27	25	52
Re-vaccinations	7,373	1,677	9,050
Total number ...	7,400	1,702	9,102

The female pilgrims were vaccinated by Nurse, Mrs. Rachelbai.

Ill-effects by Vaccination.

No serious ill-effects following Vaccination were observed or brought to notice during the year.

Vaccination in Bandra and Kurla.

The following Table shows the Vaccination work done in the Bandra and Kurla Circles in 1914 compared with that done in 1913:—

Vaccination Circles.	Population according to the Census of 1911.	Year.	Children successfully vaccinated.		Children available for vaccination.	Persons primarily vaccinated.	Persons re-vaccinated.	Total number of persons operated upon.
			Under 1 year.	Under 6 years.				
Bandra	24,286	1913	195	84	450	353	97	450
		1914	211	101	396	363	87	450
Kurla	15,081	1913	72	30	66	213	1	214
		1914	57	41	151	152	.....	152

J. S. NERURKER, B.Sc., L.M.S., D.P.H.,
Superintendent of Vaccination,
Bombay.

BOMBAY, *4th March* 1915.

1

Meteorological Data (Government Observatory, Colaba), Latitude 18°-53′-36″, North, Longitude 72°-48′-56″, East.

MONTHS.	Barometer.	Reading of Thermometer.				Mean Maximum Solar Radiation.	Difference between Dew-point, Temperature and Mean Air Temperature.	Degree of Humidity, complete Saturation being 100.	Prevailing Direction of Wind.	Rainfall.		
	Mean Daily Readings.	Maximum.	Minimum.	Mean Daily Range.	Mean Daily Value.					Number of Days on which Rain fell.	Total Fall of Rain during the Month.	Maximum Fall of Rain.
1914.	In.	°	°	°	°	°	°				In.	In.
January	29·999	87·2	68·7	11·4	77·0	130·3	11·8	68	N.	.....	0·00	.....
February	·942	84·5	63·4	9·9	76·0	126·2	11·5	68	N. N. W.	1	0·08	0·08
March	·893	86·3	69·2	9·6	78·0	128·3	10·2	72	N. W.	.....	0·00	.....
April	·853	89·5	74·4	8·8	81·9	130·8	9·0	75	W. N. W.	1	0·07	0·07
May	·782	91·3	80·8	7·1	86·5	133·6	9·6	73	W.	.....	0·00	.....
June...	·660	91·6	77·4	5·9	85·0	126·4	7·0	80	S. W.	25	16·69	3·86
July	·615	88·7	76·2	3·7	82·0	111·3	4·5	87	W. S. W.	31	31·12	6·28
August	·719	85·4	76·8	4·3	81·2	121·9	4·8	86	W.	30	12·44	2·32
September	·764	86·6	76·8	5·1	81·5	123·6	5·0	85	W. S. W.	23	21·03	5·65
October	·886	92·2	76·5	9·2	84·4	135·4	10·1	73	N.	1	0·01	0·01
November	·873	91·7	73·4	10·4	82·7	133·4	12·9	66	N. N. E.	2	0·18	0·15
December	·923	88·4	66·7	11·0	77·4	127·8	12·7	66	N.	.....	0·00	.....

2.

TABLE showing the Population and the Number of Births and the Birth rate by Sex and Section in 1914.

1	2	3			4			5			6	7	8	9		
Ward.	Section.	Population according to the Census of 1911.			Number of Births registered.			Ratio of Births per 1,000 of Population.			Number of male births to 100 female births.	Excess of births over deaths per 1,000 of Population.	Excess of deaths over births per 1,000 of Population.	Mean ratio of births per 1,000 of Population during the previous 5 years.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.				Males.	Females.	Total.
A	Upper Colaba...	869	688	1,557	79	60	139	90·90	87·20	89·27	131·66	44·95	.....	27·35	60·17	37·64
	Middle and Lower Colaba...	13,514	6,165	19,679	102	111	213	7·54	18·00	10·82	91·89		15·85	11·53	23·63	15·50
	Fort, South ...	2,825	637	3,462	11	12	23	3·89	18·83	6·64	91·66		9·24	3·37	11·56	4·92
	Fort, North ...	15,564	9,836	25,400	261	256	517	16·76	26·02	20·35	101·95		14·80	16·06	22·94	18·80
	Esplanade ...	12,544	5,217	17,761	106	93	199	8·45	17·82	11·20	113·97		23·81	9·12	18·93	12·01
B	Mandvi ...	23,317	9,885	33,202	198	192	390	8·49	19·42	8·73	103·12		19·72	10·05	17·80	12·67
	Chukla ...	15,768	8,463	24,231	186	216	402	11·79	25·52	16·59	86·11		18·44	15·98	27·72	20·12
	Umarkhadi ...	28,491	17,188	45,679	561	574	1,135	19·69	33·39	24·84	97·73		19·57	19·50	29·38	23·31
	Dongri ...	16,985	10,261	27,246	214	219	433	12·59	21·34	15·89	97·71		14·42	19·63	24·97	21·86
C	Market ...	22,011	8,161	30,172	152	150	302	6·90	18·38	10·00	101·33		11·40	7·25	18·03	10·36
	Dhobi Talao ...	24,670	14,014	38,684	432	416	848	17·51	29·68	21·92	93.91		9·95	16·89	27·41	20·79
	Fanaswadi ...	18,125	9,278	27,403	287	324	611	15·83	34·92	22·29	88·58		4·49	14·16	24·06	17·62
	Bhuleshwar ...	24,713	11,746	36,459	304	284	588	12·30	24·17	16·12	107·04		17·03	11·94	22·25	15·35
	Khara Talao ...	15,052	7,927	22,979	224	245	469	14·88	30·90	20·40	91·42		19·58	16·20	28·05	20·43
	Kumbharwada ...	17,908	9,795	27,703	263	281	544	14·68	28·68	19·63	93·59		15·88	16·12	24·77	19·27
D	Khetwadi ...	19,850	12,087	31,937	347	336	683	17·48	27·79	21·38	103·27		6·76	16·55	24·47	19·57
	Girgaum ...	19,156	11,623	30,779	309	296	605	16·13	25·46	19·65	104·39		7·92	15·61	24·56	19·06
	Chowpati ...	7,088	4,309	11,397	111	125	236	15·66	29·00	20·70	88·80		5·17	13·72	21·94	17·42
	Walkeshwar ...	6,883	3,757	10,640	121	105	226	17·57	27·94	21·24	115·23		3·57	13·58	24·56	17·36
	Mahalakshmi...	16,608	9,694	26,302	295	286	581	17·76	29·50	22·08	103·14		3·87	16·39	27·92	20·74
E	Mazagon ...	19,398	10,677	30,075	375	345	720	19·33	32·31	23·94	108·69		15·66	20·96	32·91	24·77
	Tarwadi ...	18,141	10,283	28,424	402	476	878	22·15	46·28	30·88	84·45		20·54	22·96	42·05	30·00
	2nd Nagpada...	13,321	8,379	21,700	268	258	526	20·11	30·79	24·23	103·87		21·56	21·00	29·20	24·23
	Kamathipura...	22,523	14,228	36,751	400	400	800	17·75	28·11	21·76	100·00		19·67	19·03	27·09	22·26
	Tardeo ...	17,241	10,517	27,758	362	322	684	20·99	30·61	24·64	112·42		11·60	21·02	28·78	24·13
	Byculla ...	47,672	27,676	75,348	985	876	1,861	20·66	31·65	24·69	112·44		13·40	24·88	44·21	32·03
	1st Nagpada ...	4,182	2,232	6,414	99	74	173	23·67	33·15	26·97	133·78		4·20	18·50	34·30	22·73
F	Parel ...	28,858	16,616	45,474	406	413	819	14·06	24·85	18·01	122·51		11·06	19·56	30·56	23·68
	Sewri ...	11,841	7,226	19,067	230	199	429	19·42	27·53	22·49	115·57		12·63	20·06	30·72	24·22
	Sion ...	18,463	12,217	30,680	416	413	829	22·53	33·80	27·02	100·72		6·87	22·81	32·17	26·58
G	Mahim ...	18,271	12,221	30,492	444	456	900	24·30	37·31	29·51	97·36		6·72	24·83	35·29	29·12
	Worli ...	58,473	31,138	89,611	970	945	1,915	16·58	30·34	21·37	102·64		8·44	18·07	30·42	22·59
	Harbour, Docks, Railways and Homeless..	39,963	5,016	44,979	1	.....	1	·02	.....	·02	.....		3·73	.....	.....	·02
	Total ...	640,288	339,157	979,445	9,921	9,758	19,679	15·49	28·77	2·00	101·67	.....	12·42	16·61	28·64	20·90

TABLE of Deaths and the Death-rate from some of the Principal Diseases by Sections in 1914.

2	3	4	5			6			7	8																9		
SECTION.	Area in square miles.	Average population per square mile calculated on the Census population of 1911.	Population by the Census of 1911.			Number of deaths registered.			Number of deaths amongst males to every 100 deaths amongst females.	Death-rate per 1,000 of population.														All Causes.			Mean Ratio of deaths per 1,000 of population during the previous 5 years.		
			Males.	Females.	Total.	Males.	Females.	Total.		Cholera.	Small-pox.	Measles.	Plague.	Malaria.	Enteric.	Other Fevers.	Diarrhœa and Dysentery.	Tuberculosis.	Phthisis.	Other Respiratory Diseases.	Injuries.	All other causes.	Males.	Females.	Total.	Males.	Females.	Total.
Upper Colaba ...	·22	7,077	869	688	1,557	45	24	69	53·33	...	...	...	2·56	·64	...	1·92	7·70	...	3·85	12·84	2·56	12·20	51·78	34·88	44·31	29·17	46·09	34·36
Middle and Lower Colaba.	·45	43,731	13,514	6,165	19,679	307	218	525	71·00	·05	·55	...	4·87	·55	·05	2·33	1·47	·15	·60	7·46	·55	7·97	22·71	35·36	26·67	25·96	41·40	30·95
Fort, South ...	·21	16,485	2,825	637	3,462	35	20	55	57·14	...	...	...	2·88	...	·86	·86	·86	·28	·28	3·75	·86	5·19	12·38	31·39	15·86	15·18	20·23	16·14
Fort, North ...	·21	120,952	15,564	9,836	25,400	526	367	893	69·77	·19	·11	·15	3·50	·62	·74	2·59	2·32	·47	1·65	10·69	·78	11·65	33·79	37·31	35·15	35·51	43·12	38·50
Esplanade ...	1·04	17,077	12,544	5,217	17,761	476	146	622	30·67	·39	·33	·05	1·74	1·29	·33	4·56	6·36	·73	2·42	6·70	1·85	8·22	37·94	27·98	35·02	43·38	43·27	43·35
Mandvi ...	·26	127,700	23,317	9,885	33,202	645	400	1,045	62·01	·12	·21	·27	3·94	·18	·18	2·10	1·92	·33	1·89	10·48	·33	9·48	27·66	40·46	31·47	35·44	44·58	38·53
Chukla ...	·08	302,887	15,768	8,463	24,231	442	407	849	92·08	·08	·04	·16	2·47	·28	·08	1·60	1·77	·66	3·54	11·34	·49	12·46	28·03	48·09	35·03	34·03	53·39	40·86
Umerkhadi ...	·16	285,493	28,491	17,188	45,679	1,134	895	2,029	78·92	·28	·04	·41	2·88	·17	·10	2·80	3·37	·61	2·93	12·80	·43	17·53	39·80	52·07	44·41	42·03	53·30	46·38
Dongri ...	·45	60,546	16,985	10,261	27,246	481	345	826	71·72	·22	·18	·40	2·09	·14	...	3·30	2·53	·40	1·17	10·31	·66	8·88	38·31	33·62	30·31	40·96	43·09	41·81
Market ...	·14	215,514	22,011	8,161	30,172	400	246	646	61·50	·23	·19	·12	2·28	·29	·19	1·32	1·42	·26	·82	6·89	·56	6·76	18·17	30·14	21·41	23·19	39·00	27·64
Dhobi Talao ...	·16	241,775	24,670	14,014	38,684	690	543	1,233	73·69	·20	·49	·36	3·56	·36	·31	1·44	2·24	·31	1·18	9·51	·62	11·24	27.96	38·74	31·87	31·86	40·25	34·98
Fanaswadi ...	·20	137,015	18,125	9,278	27,403	399	335	734	83·95	·14	·29	·65	2·37	·19	·21	1·71	1·93	·29	·80	7·59	·43	10·21	22·01	36·10	26·78	24·87	36·95	29·10
Bhuleshwar ...	·12	303,825	24,713	11,746	36,459	677	532	1,209	78·58	·03	...	·05	2·63	·27	·05	1·26	3·70	·30	·87	10·12	·60	13·24	27·39	45·29	33·16	31·57	50·63	37·87
Khara Talao ...	·07	328,271	15,052	7,927	22,979	497	422	919	84·90	·13	·08	·47	2·78	·13	...	1·82	3·26	·47	2·74	9·92	·87	17·27	33·01	53·23	39·99	38·55	57·25	45·27
Kumbharwada ...	·07	395,757	17,908	9,795	27,703	550	434	984	78·90	·10	·07	·39	3·14	·10	·10	2·45	2·77	·39	2·70	9·56	·28	13·39	30·71	44·30	35·51	31·14	45·72	36·35
Khetwadi ...	·27	118,285	19,850	12,087	31,937	515	384	899	74·56	·09	·34	·15	1·31	·31	·25	1·47	1·59	·59	2·59	7·13	·84	11·42	25·94	31·76	28·14	25·02	35·37	28·96
Girgaum ...	·20	153,895	19,156	11,623	30,779	473	376	849	79·49	·06	·53	·38	·87	·06	·19	1·85	1·20	·55	1·88	7·73	·38	11·79	24·69	32·34	27·58	28·67	40·44	33·16
Chowpati ...	·17	67,041	7,088	4,309	11,397	157	138	295	87·89	·43	·35	...	1·57	·26	·08	1·40	1·93	·26	1·84	5·52	1·05	11·14	22·15	32·02	25·88	22·28	27·91	24·56
Walkeshwar ...	·85	12,517	6,883	3,757	10,640	150	114	264	76·00	·09	·09	·18	2·53	·18	·09	·84	1·12	·65	1·12	6·48	1·12	10·24	21·79	30·34	24·81	15·04	21·27	17·45
Mahalakshmi ...	1·00	26,302	16,608	9,694	26,302	374	309	683	82·62	·07	·15	·38	4·06	·19	·19	1·78	3·07	.19	1·44	5·17	·45	8·78	22·51	31·87	25·96	24·61	33·86	28·08
Mazagon ...	·96	31,328	19,398	10,677	30,075	698	493	1,191	70·63	·53	·36	·16	5·12	·23	·26	6·94	5·22	·19	·49	10·30	·63	9·11	35·98	46·17	39·60	36·36	46·90	40·30
Tarwadi ...	·75	37,898	18,141	10,283	28,424	824	638	1,462	77·42	·24	·31	·35	3·76	·31	·24	7·03	7·24	1·51	1·47	11·45	2·28	15·16	45·42	62·04	51·43	53·60	61·05	56·30
2nd Nagpada ...	·05	434,000	13,321	8,379	21,700	537	457	994	85·10	·04	·13	·32	2·02	·13	...	2·62	3·41	·32	2·76	11·65	·50	21·84	40·31	54·54	45·80	40·27	60·39	48·19
Kamathipura ...	·10	367,510	22,523	14,228	36,751	816	707	1,523	86·64	·10	·21	·40	2·58	·02	...	3·78	3·70	·51	4·84	9·55	·54	15·15	36·22	49 69	41·44	40·71	56·37	46·96
Tardeo ...	·36	77,105	17,241	10,517	27,758	554	452	1,006	81·58	·18	·07	·39	2·26	·36	·10	2·19	4·17	·46	3·02	8·82	·36	13·79	32·13	42·97	36·24	33·81	44·26	37·94
Byculla ...	·80	94,185	41,672	27,676	75,348	1,529	1,342	2,871	87·76	·38	·27	·07	3·64	·19	·07	2·15	4·73	·50	·54	11·49	·46	13·53	36·69	48.48	38·10	35·90	52·86	42·18
1st Nagpada ...	·05	128,280	4,182	2,232	6,414	115	85	200	73·91	...	·15	·31	2·02	...	·31	2·33	2·65	1·40	1·71	9·04	·93	10·28	27·49	38·08	31·18	33·78	42·74	36·85
Parel ...	·86	52,876	28,858	16,616	45,474	719	603	1,322	83·86	·30	·26	·19	3·51	·13	·06	4·28	2·88	·10	·83	8·07	·28	8·11	24·91	36·29	29·07	28·82	39·31	32·75
Sewri ...	·77	24,762	11,841	7,226	19,067	373	297	670	79·62	·36	·41	·10	6·87	...	...	4·66	5·03	·10	·41	7·18	·52	9·44	31·50	41·10	34·17	29·72	39·89	33·58
Sion ...	6·66	4,606	18,463	12,217	30,680	594	446	1,040	75·08	·78	·22	·29	4·43	·16	·22	2·67	4·10	·09	·74	6·74	·88	12·51	32·17	36·50	33·89	29·56	38·46	33·12
Mahim ...	2·01	15,170	18,271	12,221	30,492	566	539	1,105	95·22	·36	·16	·49	4.39	·13	·06	1·80	5·28	·29	1·14	10·65	·62	10·83	30·97	44·10	36·23	31·02	38·88	34·19
Worli ...	2·84	31,553	58,473	13,138	89,611	1,451	1,221	2,672	84·14	·16	·45	·39	3·09	·05	·06	2·63	3·09	·07	·92	9·38	·40	9·07	24·81	32·93	29·81	28·32	41·87	33·27
Harbour, Docks, Railways and Homeless ...	...	...	39,963	5,016	44,979	161	8	169	4·96	·24	·31	...	·04	·17	·24	·35	·64	·02	·17	·40	·60	·53	4·02	1·59	03·75	3·51	1·72	3·33
Total ...	22·55	43,453	640,288	339,157	979,445	17,910	13,943	31,853	77·85	·22	·25	·26	3·00	·21	·15	2·56	3·16	·37	1·55	8·91	·62	11·19	27·97	41·11	32·52	31·10	44·44	35·86

TABLE of Deaths registered by Section and Month in 1914.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total No. of deaths registered in 1914.
A	Upper Colaba	13	7	4	2	5	2	3	9	6	4	3	11	69
	Middle and Lower Colaba	51	46	69	64	53	36	31	46	49	36	24	20	525
	Fort, South	8	1	2	5	6	4	5	3	71	5	5	4	55
	Fort, North	100	68	112	114	84	62	67	61	64	42	64	55	893
	Esplanade	78	62	66	58	50	28	32	34	54	43	38	79	622
B	Mandvi	115	111	136	135	133	70	75	73	49	72	34	42	1,045
	Chukla	73	84	66	103	107	74	74	57	59	54	48	50	849
	Umarkhadi	194	202	213	224	200	155	157	172	144	128	132	108	2,029
	Dongri	109	87	103	90	86	66	62	43	39	51	40	50	826
C	Market	68	55	65	73	74	47	46	49	34	49	44	42	646
	Dhobi Talao	119	116	125	165	138	92	75	108	94	69	58	74	1,233
	Fanaswadi	47	59	85	96	71	54	63	54	41	72	51	41	734
	Bhuleshwar	111	108	142	142	151	101	93	88	71	74	56	72	1,209
	Khara Talao	101	78	83	106	108	71	63	77	59	48	61	64	919
	Kumbharwada	112	96	100	117	91	81	77	70	60	59	63	58	984
D	Khetwadi	81	79	79	94	89	73	72	88	72	67	46	59	899
	Girgaum	89	80	83	88	74	67	72	62	57	63	60	54	849
	Chowpati	29	27	37	27	24	27	21	23	25	18	18	19	295
	Walkeshwar	18	19	29	30	38	19	19	16	22	16	17	21	264
	Mahalakshmi	56	52	97	111	59	48	42	66	45	33	48	26	683
E	Mazagon	88	119	146	178	149	77	79	102	75	59	57	62	1,191
	Tarwadi	130	117	159	165	138	97	94	141	122	107	97	95	1,462
	2nd Nagpada	78	98	109	105	108	97	81	87	49	62	51	69	994
	Kamathipura	134	159	170	181	150	101	80	147	103	102	99	97	1,523
	Tardeo	85	87	105	116	92	89	68	98	83	63	70	59	1,006
	Byculla	260	261	356	384	300	229	214	243	188	156	133	147	2,871
	1st Nagpada	12	15	22	26	12	20	26	18	20	11	10	8	200
F	Parel	86	115	165	174	175	94	97	134	94	68	53	67	1,322
	Sewri	69	59	71	93	99	43	67	48	35	19	27	40	670
	Sion	96	90	81	125	96	82	86	119	75	72	61	57	1,040
G	Mahim	95	98	112	165	103	75	80	88	84	70	64	71	1,105
	Worli	256	219	291	360	286	202	229	255	174	155	112	133	2,672
	Harbour, Docks, Railways and Homeless...	14	12	7	5	9	7	3	23	10	11	29	39	165
	Total ...	2,975	2,886	3,490	3,921	3,358	2,381	2,353	2,702	2,163	1,958	1,773	1,893	31,853

TABLE of Deaths registered from all Causes by Section and Age-Period in 1914.

1	2	3		4		5		6		7		8		9		10		11		12		13		14		15
Ward.	SECTION.	Under 1 year.		1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.		20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.		Unspecified Age.		Total.		Total.
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
A	Upper Colaba ...	6	3	5	3	2	1	1	2	2	1	14	6	7	2	5	1	1	...	2	5	...	...	45	24	69
	Middle and Lower Colaba ...	59	64	28	25	12	14	11	11	24	16	59	32	43	16	30	12	20	11	21	17	...	...	307	218	525
	Fort, South ...	4	6	1	2	2	1	1	...	2	...	11	2	5	3	1	2	5	3	3	1	...	...	35	20	55
	Fort, North ...	98	88	41	29	18	15	15	14	38	28	113	58	64	36	49	24	45	32	45	43	...	...	526	367	893
	Esplanade ...	42	27	19	8	6	9	10	5	22	11	126	20	28	19	54	15	63	19	36	13	...	...	476	146	622
B	Mandvi ...	115	95	46	58	19	17	24	17	66	49	118	54	98	26	65	25	49	21	45	38	...	...	645	400	1,045
	Chukla ...	75	95	45	42	15	22	13	20	33	47	64	62	54	28	59	24	40	25	44	42	...	...	442	407	849
	Umarkhadi ...	242	237	118	106	31	32	38	34	76	82	193	132	152	67	100	50	89	51	94	104	1	...	1,134	895	2,029
	Dongri ...	105	109	50	57	10	17	15	13	41	18	94	42	63	28	42	18	35	16	26	27	...	...	481	345	826
C	Market ...	85	60	32	29	9	13	15	15	37	22	70	36	43	23	54	13	26	14	29	21	...	...	400	246	646
	Dhobi Talao ...	139	127	70	72	16	29	17	19	64	41	117	90	90	37	71	32	44	30	62	66	...	...	690	543	1,233
	Fanaswadi ...	96	79	55	47	14	13	7	12	25	35	71	48	41	37	36	22	28	17	26	25	...	...	399	335	734
	Bhuleshwar ...	137	112	76	68	20	18	14	19	54	54	133	99	79	41	63	30	53	31	46	59	2	1	677	532	1,209
	Khara Talao ...	122	97	50	43	13	14	12	17	34	38	87	78	69	50	37	32	37	18	36	35	...	...	497	422	919
	Kumbharwada ...	119	108	61	63	15	15	14	16	51	27	98	75	69	36	52	25	34	21	37	48	...	...	550	434	984
D	Khetwadi ...	107	89	63	53	6	9	14	16	32	23	88	63	67	26	44	28	45	19	49	58	...	...	515	384	899
	Girgaum ...	121	95	70	54	15	13	13	11	26	42	65	49	44	22	45	27	37	23	37	40	...	...	473	376	849
	Chowpati ...	34	27	11	22	3	3	4	4	11	11	28	22	17	9	18	8	14	14	17	18	...	...	157	138	295
	Walkeshwar ...	36	22	9	16	4	6	7	3	8	10	19	20	21	11	14	7	14	7	18	12	...	...	150	114	264
	Mahalakshmi ...	82	83	35	27	11	20	13	9	30	28	69	50	40	29	32	18	28	16	34	29	...	...	374	309	683
E	Mazagon ...	138	125	62	68	25	32	31	14	51	35	137	72	71	31	78	37	47	27	58	52	...	...	698	493	1,191
	Tarwadi ...	193	234	61	73	22	16	24	12	64	36	148	91	126	42	93	46	50	43	42	45	1	...	824	638	1,462
	2nd Nagpada ...	139	98	55	62	19	20	15	20	38	45	76	86	51	35	39	27	38	20	67	44	...	...	537	457	994
	Kamathipura ...	192	180	112	117	32	30	24	14	54	54	143	98	91	58	69	44	56	35	43	77	...	...	816	707	1,523
	Tardeo ...	149	112	78	61	13	14	11	17	36	31	76	71	75	43	38	28	28	27	50	48	...	...	554	452	1,006
	Byculla ...	379	357	192	213	49	74	45	39	103	105	285	189	186	115	101	65	90	73	98	112	1	...	1,529	1,342	2,871
	1st Nagpada ...	20	22	13	14	1	3	1	...	9	7	26	13	16	12	12	5	7	3	10	6	...	...	115	85	200
F	Parel ...	171	162	61	86	20	34	32	25	58	45	160	85	78	46	44	40	49	29	46	51	...	...	719	603	1,322
	Sewri ...	89	84	48	34	17	23	21	13	29	17	60	46	46	22	19	20	16	13	28	25	...	...	373	297	670
	Sion ...	129	130	67	56	30	21	20	21	43	27	120	69	63	35	48	21	33	21	41	45	...	...	594	446	1,040
G	Mahim ...	123	147	74	76	34	28	17	25	40	21	87	82	69	38	34	25	45	35	43	62	...	...	566	539	1,105
	Worli ...	406	354	166	216	40	77	48	30	124	75	265	165	148	85	82	50	59	53	113	115	...	1	1,451	1,221	2,672
	Harbour, Docks, Railways and Homeless	...	..	1	...	2	...	6	...	14	1	42	...	39	1	21	2	18	1	18	3	...	...	161	8	169
	Total ...	3,952	3,628	1,875	1,900	545	653	553	487	1,339	1,082	3,262	2,105	2,223	1,109	1,549	823	1,243	768	1,364	1,386	5	2	17,910	13,943	31,853
	Persons ...	7,580		3,775		1,198		1,040		2,421		5,367		3,332		2,372		2,011		2,750		7		31,853		...
	Percentages to Total Mortality ...	23·79		11·85		3·76		3·26		7·60		16·84		10·46		7·44		6·31		8·63		·02		100·00		...

6

TABLE showing the Population, the Number of Deaths from all Causes and the

1	2	3													
		POPULATION BY THE CENSUS OF 1911.													
Ward.	SECTION.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other Castes.	Hindus, low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Other and Unknown Castes.	Total.
A	Upper Colaba ...	15	68	...	...	521	533	98	104	4	113	45	56	...	1,557
	Middle and Lower Colaba.	149	169	69	2	11,094	1,690	1,190	1,085	170	1,760	223	2,037	41	19,679
	Fort, South ...	...	31	7	...	1,460	247	166	96	93	821	55	486	...	3,462
	Fort, North ...	800	1,075	2	1,497	7,779	1,358	1,440	9,692	12	1,378	155	167	45	25,400
	Esplanade ...	1	270	...	32	6,004	5,556	3,019	503	55	967	248	1,062	44	17,761
B	Mandvi ...	2,562	2,387	16	1,659	20,360	194	5,217	9	541	186	8	20	43	33,202
	Chukla ...	765	690	...	160	7,385	34	15,082	74	...	34	...	9	...	24,231
	Umarkhadi ...	1,158	351	8	60	11,916	788	29,280	38	1,371	640	39	22	8	45,679
	Dongri ...	351	250	38	8	22,092	1,222	2,571	24	436	166	13	72	3	27,246
C	Market ..	4,489	3,514	91	2,112	14,032	75	3,415	1,306	...	1,111	62	28	37	30,172
	Dhobi Talao ...	881	2,547	52	1,166	16,226	1,308	1,015	8,619	1	6,461	98	263	12	38,684
	Fanaswadi ...	520	5,104	28	46	16,162	796	502	2,005	2	2,181	7	41	9	27,403
	Bhuleshwar ...	1,949	5,054	...	79	17,194	29	11,377	715	...	28	1	3	...	36,459
	Khara Talao ...	471	173	26	6	5,967	158	15,938	171	28	40	1	...	...	22,979
	Kumbharwada ...	391	847	161	33	23,016	38	2,822	326	3	65	1	...	...	27,705
D	Khetwadi ...	167	3,443	49	111	15,727	245	3,643	7,326	36	1,087	25	62	16	31,937
	Girgaum ...	378	10,079	36	32	18,184	48	295	582	1	1,010	74	60	...	30,779
	Chowpati ...	191	2,266	...	45	7,224	2	331	859	5	444	4	25	1	11,397
	Walkeshwar ...	275	1,023	14	170	5,888	269	677	1,117	14	831	27	271	64	10,640
	Mahalakshmi ...	34	1,933	18	119	17,191	694	887	4,049	16	1,228	2	131	...	26,302
E	Mazagon ...	237	411	7	...	18,487	1,235	4,562	1,243	35	3,114	292	413	39	30,075
	Tarwadi ...	200	547	20	6	18,914	1,502	3,080	990	600	1,219	667	678	1	28,424
	2nd Nagpada ...	67	66	...	...	5,309	905	14,690	82	374	196	1	7	3	21,700
	Kamathipura ...	364	825	75	19	21,268	5,432	7,742	174	137	528	64	51	72	36,751
	Tardeo ...	246	810	8	4	12,652	4,209	4,859	3,815	72	884	96	29	34	27,758
	Byculla ...	783	1,348	30	3	42,470	7,831	16,556	833	906	2,720	904	961	3	75,348
	Ist Nagpada ...	120	347	4	...	2,796	50	1,233	46	808	606	282	121	1	6,414
F	Parel ...	592	1,356	113	28	36,596	1,785	2,192	1,681	96	829	89	111	6	45,474
	Sewri ...	201	212	19	...	16,172	919	992	42	7	423	18	62	...	19,067
	Sion ...	459	1,849	30	238	19,459	3,085	2,412	728	21	2,191	92	114	2	30,680
G	Mahim ...	410	1,230	54	31	20,498	927	3,609	550	40	2,913	103	125	2	30,492
	Worli ...	915	2,374	189	46	65,875	8,666	4,859	1,918	683	3,393	294	399	...	89,611
	Harbour, Docks, Railways, and Homeless.	319	977	15	68	21,276	2,405	13,560	229	30	1,706	198	4,008	188	44,979
	Total ...	20,460	53,656	1,179	7,780	547,192	54,235	179,346	50,931	6,597	41,273	4,188	11,894	714	979,445

Death-Rate per 1,000 of population by Caste and Section in 1914.

4 — Number of Deaths from all Causes excluding Still-born.														5 — Death-rate per 1,000 of Population amongst :—													
Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other Castes.	Hindus, low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Other and unknown Castes.	Total.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other Castes.	Hindus, low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Other and unknown Castes.	Total.
...	3	...	...	21	20	2	...	...	2	...	21	..	69	.....	44·11	...	...	49·30	37·52	20·40	...	...	17·69	...	375·00	.....	44·31
7	3	1	...	311	95	30	7	1	25	6	37	2	525	46·97	17·75	14·49	...	28·03	56·21	25·21	6·45	5·88	14·20	26·90	18·16	48·78	21·67
...	...	...	...	15	4	5	2	...	6	5	18	...	55	.....	...	...	...	10·27	16·19	30·12	20·83	...	7·30	90·90	37·03	.....	15·86
58	36	1	55	251	113	68	255	1	45	5	4	1	893	72·50	33·48	500·00	36·74	32·26	83·21	47·22	26·31	83·33	32·65	32·25	23·95	22·22	35·50
1	12	...	...	225	114	201	5	...	31	14	18	1	622	1,000·00	44·44	...	...	37·47	20·51	66·57	9·94	...	32·05	56·45	16·94	22·72	35·02
143	76	1	48	540	11	206	...	14	4	...	1	1	1,045	55·81	31·83	62·50	28·93	26·52	56·76	39·48	...	25·87	21·50	...	50·00	23·25	31·47
64	15	...	6	137	4	617	4	...	...	...	...	2	849	83·66	21·73	...	37·50	12·55	170·64	40·90	54·05	...	...	...	...	.....	35·03
39	11	2	...	386	71	1,422	...	56	36	1	1	4	2,029	33·67	31·53	250·00	...	32·39	90·10	48·56	...	40·84	56·25	25·64	45·45	500·00	44·41
15	8	1	...	527	148	112	3	4	4	...	3	1	826	43·73	32·00	26·31	...	23·85	121·11	43·56	125·00	9·17	24·09	...	41.66	333·33	30·31
180	51	1	55	228	3	74	17	...	32	3	...	2	646	40·09	14·51	10·98	26·04	16·24	40·00	21·66	14·09	...	28·80	48·38	...	54·05	21·41
53	48	...	36	536	101	44	187	1	225	1	1	2	1,233	60·15	18·06	...	30·87	33·03	77·21	43·34	21·69	1000·00	34·82	10·20	3·80	166·66	31·87
40	134	...	...	455	24	13	33	...	34	...	...	1	734	76·92	26·25	...	...	28·15	30·15	25·89	16·45	...	15·58	...	...	111·11	26·78
255	76	...	2	307	32	515	17	...	2	...	...	3	1,209	131·10	14·94	...	25·31	17·85	1103·44	45·26	23·77	...	71·42	...	...	.....	33·16
21	7	...	...	169	62	650	8	...	1	...	...	1	919	44·58	40·46	...	...	28·32	392·40	40·78	45·78	...	25·00	...	...	.....	39·99
32	24	8	...	759	57	97	1	...	5	...	...	1	984	81·34	28·33	49·68	...	32·97	1500·00	34·37	3·06	...	76·92	...	...	.....	35·51
26	75	1	5	434	13	122	196	...	25	...	1	1	899	155·68	21·78	20·40	45·04	27·59	53·06	33·48	26·75	...	22·99	...	16·12	62·50	28·14
50	203	...	1	540	4	18	11	...	21	...	1	...	849	132·27	20·14	...	31·25	29·69	83·33	61·01	18·90	...	20·79	...	16·66	.....	27·58
12	20	...	8	208	...	11	23	...	11	2	...	...	295	62·82	8·82	...	177·77	28·79	...	33·23	26·77	...	24·77	500·00	...	.....	25·88
19	19	...	6	160	5	11	30	...	7	1	6	...	264	69·09	18·57	...	35·29	27·17	18·58	16·24	26·85	...	8·42	37·03	22·14	.....	24·81
8	28	1	3	395	124	27	79	...	14	1	2	1	683	235·29	14·48	55·55	25·21	22·97	178·67	30·43	19·51	...	11·40	500·00	15·26	.....	25·96
12	24	2	...	705	90	204	36	1	99	1	14	3	1,191	50·63	58·39	285·71	...	38·13	72·87	44·71	28·96	28·57	41·79	3·42	33·89	76·92	39·60
12	15	2	...	801	91	215	21	13	250	24	13	5	1,462	60·00	27·42	100·00	...	42·34	60·58	69·80	21·21	21·66	205·08	35·98	19·17	.....	51·43
6	1	1	...	87	170	704	3	7	11	2	2	..	994	89·55	15·15	...	...	16·38	187·84	47·92	36·58	18·71	56·12	...	285·71	.....	45·80
14	27	04	...	746	369	260	...	3	34	4	...	2	1,523	38·46	32·72	853·33	...	35·07	67·93	33·58	...	21·89	83·33	62·50	...	27·77	41·44
12	17	1	1	298	340	182	114	...	34	3	3	1	1,006	48·78	20·98	125·00	250·00	23·55	81·25	37·45	29·88	...	38·46	31·25	103·44	13·51	36·24
38	30	9	...	1,252	542	782	15	33	114	29	25	2	2,871	48·53	22·25	300·00	...	29·47	69·21	47·23	18·00	36·42	41·91	32·07	26·04	666·66	38·16
4	14	...	...	62	11	52	...	24	23	4	6	...	200	33·33	40·34	...	...	22·17	220·00	42·70	...	29·70	37·95	14·18	49·58	.....	31·18
19	26	9	1	966	152	87	20	4	32	2	4	...	1,322	32·09	19·17	79·64	35·71	26·39	85·15	39·68	11·89	41·66	35·59	22·47	36·03	.....	29·07
6	10	.	...	527	47	63	...	...	13	1	2	1	670	29·85	47·16	...	...	32·58	51·14	63·50	...	...	30·73	55·55	32·25	.....	34·17
25	37	...	7	567	202	95	9	...	91	3	4	...	1,040	24·46	20·01	...	29·41	29·13	65·47	39·38	12·36	...	41·53	32·60	35·08	.....	33·89
11	37	1	..	555	237	165	10	...	89	...	...	...	1,105	26·82	30·08	18·51	...	27·07	255·66	45·71	18·18	...	30·55	...	...	.....	36·23
32	61	33	...	1,562	651	173	31	21	95	7	3	3	2,672	34·96	25·69	174·60	...	23·71	75·12	35·60	16·16	30·74	27·99	230·8	7·51	.....	29·81
...	1	...	...	52	1	84	...	...	...	...	28	3	169	...	1·02	...	...	2·44	0·41	6·19	...	...	...	...	6·98	15·95	3·75
1,214	1,147	139	234	14,784	3,908	7,311	1,137	183	1,415	119	218	44	31,853	59·33	21·37	117·89	30·07	27·02	72·05	40·76	22·22	27·73	34·28	28·41	18·32	61·62	32·52

TABLE of Deaths registered from CHOLERA by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Death Ratio per 1,000 of population. Females.	Death Ratio per 1,000 of population. Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·40
	Middle and Lower Colaba	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	·05	·61
	Fort, South	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·27
	Fort, North	...	...	1	1	...	...	...	2	...	1	...	...	...	...	5	...	...	·19	·63
	Esplanade	...	...	1	1	...	1	...	2	1	1	...	...	...	...	7	...	...	·39	·79
B	Mandvi	...	...	...	...	3	1	..	...	...	...	...	...	...	...	4	...	...	·12	1·19
	Chukla	...	...	...	...	...	...	...	1	...	..	...	1	...	...	2	...	...	·08	·83
	Umarkhadi	...	...	...	...	...	...	3	8	2	...	...	...	...	...	13	...	...	·28	1·41
	Dongri	...	...	...	...	...	...	2	3	1	...	...	...	...	...	6	...	...	·22	1·08
C	Market	...	...	...	...	...	1	1	5	...	...	...	...	...	...	7	...	...	·23	·55
	Dhobi Talao	1	...	...	1	1	...	1	4	...	...	...	...	...	...	8	...	...	·20	·81
	Fanaswadi	...	...	...	...	...	1	1	2	...	...	...	...	...	...	4	...	...	·14	·74
	Bhuleshwar	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	·02	·70
	Khara Talao	...	...	...	1	...	...	...	2	...	...	...	...	...	...	3	...	...	·13	·56
	Kumbharwada	...	...	...	...	...	1	1	1	...	...	...	...	...	...	3	...	...	·10	·87
D	Khetwadi	1	...	...	...	...	...	1	1	...	...	...	...	...	...	3	..	...	·09	·42
	Girgaum	...	...	...	..	...	...	1	...	1	...	...	...	...	...	2	...	...	·06	·77
	Chowpati	...	...	...	...	1	3	...	...	1	...	...	...	...	...	5	...	...	·43	·41
	Walkeshwar	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	·09	·34
	Mahalakshmi	...	...	...	..	...	1	...	1	...	..	...	...	...	...	2	...	...	·07	·35
E	Mazagon	...	...	...	1	...	1	2	11	1	...	...	...	...	...	16	...	...	·53	·49
	Tarwadi	...	...	...	...	...	...	..	5	2	...	...	...	...	...	7	...	...	·24	·65
	2nd Nagpada	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	·04	·32
	Kamathipura	...	...	...	...	...	..	3	1	...	...	...	...	...	...	4	...	...	·10	·38
	Tardeo	...	...	...	...	...	1	...	3	...	...	1	...	...	...	5	...	...	·18	·35
	Byculla	1	...	...	...	2	3	5	13	4	...	...	1	...	...	29	...	...	·38	·47
	1st Nagpada	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·57
F	Parel	...	...	1	...	...	5	4	3	1	...	...	...	...	...	14	...	...	·30	·32
	Sewri	...	...	...	...	...	6	1	...	...	...	...	...	...	...	7	...	...	·36	·28
	Sion	...	...	...	...	...	1	13	10	...	...	...	...	...	...	24	...	...	·78	·35
G	Mahim	...	...	1	2	...	...	...	6	2	...	...	...	...	...	11	...	...	·36	·35
	Worli...	...	...	...	...	...	...	4	10	...	1	...	..	...	...	15	...	...	·16	·30
	Harbour, Docks, Railways and Homeless	...	...	...	...	...	...	1	10	...	...	...	...	...	...	11	...	...	·24	·15
	Total	4	...	4	7	7	26	45	105	17	3	1	2	132	89	221	·20	·26	·22	·58

TABLE of Deaths registered from SMALL-POX by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Middle and Lower Colaba	...	1	5	3	2	...	...	...	...	...	...	...	...	...	11	...	...	·55	·22
	Fort, South	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·27
	Fort, North	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3	...	...	·11	·48
	Esplanade	1	...	1	2	1	...	...	...	...	...	...	1	...	...	6	...	...	·33	·33
B	Mandvi	1	1	1	2	1	...	...	...	...	...	...	1	...	...	7	...	...	·21	·36
	Chukla	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	·04	·26
	Umarkhadi	...	...	...	1	...	...	...	...	...	...	...	1	...	...	2	...	...	·04	·51
	Dongri	1	1	...	2	...	...	...	...	...	...	...	1	...	...	5	...	...	·18	·40
C	Market	2	...	1	...	...	3	...	...	...	...	...	...	...	...	6	...	...	·19	·52
	Dhobi Talao	1	3	2	6	4	2	1	...	...	...	...	...	...	...	19	...	...	·49	·95
	Fanaswadi	...	...	4	2	...	1	...	...	...	...	...	1	...	...	8	...	...	·22	·74
	Bhuleshwar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·35
	Khara Talao	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2	...	...	·08	·44
	Kumbharwada	...	...	1	...	...	1	...	...	...	...	...	...	...	...	2	...	...	·07	·67
D	Khetwadi	...	...	2	4	...	...	2	1	2	...	...	...	...	...	11	...	...	·34	·49
	Girgaum	...	5	2	3	3	...	...	...	3	...	1	1	...	...	18	...	...	·58	·90
	Chowpati	2	2	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	·35	·41
	Walkeshwar	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	·09	·17
	Mahalakshmi	...	...	...	1	2	1	...	...	...	...	...	...	...	...	4	...	...	·15	·50
E	Mazagon	...	3	3	2	1	...	2	...	...	...	...	...	...	...	11	...	...	·36	·98
	Tarwadi	1	...	1	...	...	1	1	2	2	...	1	...	...	...	9	...	...	·31	·87
	2nd Nagpada	2	...	...	...	1	...	...	...	...	...	...	...	...	...	3	...	...	·13	·41
	Kamathipura	...	...	1	2	2	1	2	...	...	...	...	...	...	...	8	...	...	·21	·76
	Tardeo	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2	...	...	·07	·64
	Byculla	1	3	5	3	4	2	1	2	...	...	...	...	...	...	21	...	...	·27	1·20
	1st Nagpada	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	·15	·57
F	Parel	...	...	1	3	5	2	...	1	...	...	...	...	...	...	12	...	...	·26	·82
	Sewri	...	1	1	2	...	2	...	...	...	...	1	1	...	...	8	...	...	·41	·44
	Sion	1	...	3	1	...	...	...	2	...	...	...	...	...	...	7	...	...	·22	·53
G	Mahim	1	...	3	...	...	...	...	...	...	...	1	...	...	...	5	...	...	·16	·49
	Worli	1	6	10	10	7	1	2	...	2	...	2	...	...	...	41	...	...	·45	·85
	Harbour, Docks, Railways and Homeless	1	...	1	...	...	...	...	1	...	...	4	7	...	...	14	...	...	·31	·25
	Total	16	26	49	55	36	17	11	9	9	...	10	14	147	·105	252	·22	·30	·25	·63

TABLE of Deaths registered from MEASLES by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Middle and Lower Colaba ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·05
	Fort, South ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Fort, North ...	...	1	2	...	...	...	...	1	...	...	...	...	...	...	4	...	...	·15	·11
	Esplanade ...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	·05	·06
B	Mandvi ...	2	2	1	4	...	...	...	...	...	...	...	...	...	...	9	...	...	·27	·19
	Chukla ...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	4	...	...	·16	·22
	Umarkhadi ...	5	3	6	3	2	...	...	...	...	...	...	...	...	...	19	...	...	·41	·28
	Dongri ...	2	...	4	3	1	...	1	...	...	...	...	...	...	...	11	...	...	·40	·64
C	Market ...	1	1	...	1	1	...	...	...	...	...	...	...	...	...	4	...	...	·12	·09
	Dhobi Talao ...	1	4	4	2	2	...	1	...	...	...	...	...	...	...	14	...	...	·36	·29
	Fanaswadi ...	2	3	4	3	3	1	...	1	...	1	...	...	...	...	18	...	...	·65	·31
	Bhuleshwar ...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	2	...	...	·05	·32
	Khara Talao ...	4	2	1	3	1	...	...	...	...	...	...	...	...	...	11	...	...	·47	·28
	Kumbharwada ...	7	...	4	...	...	...	...	...	...	...	...	...	...	...	11	...	...	·39	1·47
D	Khetwadi ...	1	...	2	1	1	...	...	...	...	...	...	...	...	...	5	...	...	·15	·21
	Girgaum ...	2	3	2	3	2	...	...	...	...	...	...	...	...	...	12	...	...	·38	·23
	Chowpati ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·16
	Walkeshwar ...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2	...	...	·08	...
	Mahalakshmi ...	1	1	4	3	...	...	...	...	...	...	1	...	...	...	10	...	...	·38	·31
E	Mazagon ...	...	...	1	4	...	...	...	...	...	...	...	...	...	...	5	...	...	·16	·19
	Tarwadi ...	3	1	1	3	...	...	1	1	...	...	...	...	...	...	10	...	...	·35	·32
	2nd Nagpada ...	1	3	3	...	...	...	...	...	...	...	...	...	...	...	7	...	...	·32	·22
	Kamathipura ...	4	7	3	...	1	...	...	...	...	...	...	...	...	...	15	...	...	·40	·21
	Tardeo ...	1	2	3	5	...	...	...	...	...	...	...	...	...	...	11	...	...	·39	·28
	Byculla ...	1	3	1	...	...	1	...	...	...	...	...	...	...	...	6	...	...	·07	·25
	1st Nagpada ...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	2	...	...	·31	·18
F	Parel ...	...	4	2	1	1	1	...	...	...	...	...	...	...	...	9	...	...	·19	·36
	Sewri ...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	·10	·16
	Sion ...	2	2	5	...	...	...	...	...	...	...	...	...	...	...	9	...	...	·29	·22
G	Mahim ...	2	5	2	2	2	...	...	...	...	...	...	2	...	...	15	...	...	·49	·29
	Worli ...	5	8	9	2	3	5	1	2	...	...	...	...	...	...	35	...	...	·39	1·56
	Harbour, Docks, Railways and Homeless ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	48	60	65	45	23	8	5	5	...	1	1	2	132	131	263	·20	·38	·26	·27

TABLE of Deaths registered from PLAGUE by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Death Ratio per 1,000 of population. Females.	Death Ratio per 1,000 of population. Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	2	1	1	...	...	...	...	...	...	...	...	...	...	...	4	...	...	2·56	2·04
	Middle and Lower Colaba	7	7	22	21	12	7	3	2	10	2	2	1	...	...	96	...	...	4·87	5·63
	Fort, South	...	...	...	4	4	...	1	...	1	...	...	...	...	...	10	...	...	2·88	2·46
	Fort, North	5	4	11	34	24	7	3	1	2	...	...	...	...	...	89	...	...	3·50	3·66
	Esplanade	...	1	1	18	10	...	1	...	...	...	...	...	...	...	31	...	...	1·74	1·65
B	Mandvi	5	17	26	42	29	3	5	1	1	2	...	...	...	...	131	...	...	3·94	3·86
	Chukla	1	4	10	18	23	1	1	2	..	...	...	...	...	...	60	...	...	2·47	3·57
	Umarkhadi	6	13	27	49	29	1	4	...	2	1	...	...	...	...	132	...	...	2·88	4·29
	Dongri	4	5	11	21	12	4	...	...	...	...	...	...	...	...	57	...	...	2·09	4·35
C	Market	...	3	15	18	23	7	1	2	...	...	...	...	...	...	69	...	...	2·28	3·38
	Dhobi Talao	1	7	15	57	43	11	4	...	...	...	...	...	...	...	138	...	...	3·56	4·06
	Faraswadi	...	3	11	22	22	5	2	...	...	...	...	...	...	...	65	...	...	2·37	4·19
	Bhuleshwar	1	1	11	33	35	10	2	2	...	...	...	1	...	...	96	...	...	2.63	3·79
	Khara Talao	...	...	7	19	36	2	...	...	...	..	...	...	...	...	64	...	...	2·78	4·11
	Kumbharwada	5	5	10	34	21	4	6	1	1	...	...	...	...	...	87	...	...	3·14	3·96
D	Khetwadi	2	1	3	17	14	2	...	1	1	...	1	...	...	...	42	...	...	1·31	1·96
	Girgaum	...	...	5	6	9	3	...	3	1	...	...	...	...	...	27	...	...	·87	2·47
	Chowpati	...	1	4	9	2	1	...	1	...	...	...	...	...	...	18	...	...	1·57	2·15
	Walkeshwar	...	...	5	8	10	2	1	...	1	...	...	...	...	...	27	...	...	2·53	·87
	Mahalakshmi	...	...	32	48	20	4	1	...	2	...	...	...	...	...	107	...	...	4·06	2·80
E	Mazagon	1	6	29	66	40	1	3	6	2	...	...	...	...	...	154	...	...	5·12	4·90
	Tarwadi	1	2	13	43	37	4	3	1	2	...	1	...	...	...	107	...	...	3·76	3·77
	2nd Nagpada	1	1	13	11	13	4	1	...	...	...	...	...	...	...	44	...	...	2·02	2·01
	Kamathipura	...	1	14	51	23	5	1	...	...	...	...	...	...	...	95	...	...	2·58	2·59
	Tardeo...	2	...	16	31	11	2	1	...	...	...	...	...	...	...	63	...	...	2·26	2·36
	Byculla	3	16	44	107	76	13	12	4	..	...	...	...	...	...	275	...	...	3·64	3·93
	1st Nagpada	...	1	3	7	1	...	...	...	...	...	...	1	...	...	13	..	...	2·02	2·12
F	Parel	1	5	33	58	47	14	2	...	...	...	..	...	...	...	160	...	...	3·51	3·79
	Sewri	4	5	19	43	46	3	8	2	1	...	...	...	...	...	131	...	...	6·87	4·37
	Sion	2	1	6	47	44	11	5	15	3	1	1	...	...	...	136	...	...	4·43	3·03
G	Mahim	4	1	10	65	37	5	2	2	3	1	2	2	...	...	134	...	...	4·59	4·68
	Worli	3	7	38	127	67	11	10	9	2	3	...	...	...	...	277	...	...	3·09	4·70
	Harbour, Docks, Railways and Homeless	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2	...	...	·04	·07
	Total ..	59	119	465	1,135	821	147	83	55	35	10	7	5	2,047	894	2,941	3·19	2·63	3·00	3·51

TABLE of Deaths registered from MALARIA by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	·64	·81
	Middle and Lower Colaba	2	2	2	...	1	...	...	..	2	1	...	1	...	...	11	...	...	·55	·55
	Fort, South	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·82
	Fort, North	2	1	...	...	4	1	...	4	1	1	1	1	...	...	16	...	...	·62	1·08
	Esplanade	4	1	2	1	1	2	...	1	2	4	4	1	...	...	23	...	...	1·29	2·19
B	Mandvi	1	1	...	...	...	...	...	1	1	2	...	...	...	...	6	...	...	·18	·45
	Chukla	...	...	...	1	1	2	...	...	1	...	2	...	...	...	7	...	...	·28	·22
	Umarkhadi	1	...	...	2	1	...	...	3	...	...	1	...	...	...	8	...	...	·17	·67
	Dongri	1	1	...	1	...	1	...	...	...	...	...	...	...	...	4	...	...	·14	·91
C	Market	2	...	1	...	...	1	1	1	...	2	1	...	...	...	9	...	...	·29	·34
	Dhobi Talao	1	2	1	1	1	2	1	3	...	...	1	1	...	...	14	...	...	·36	·36
	Fanaswadi	...	...	...	2	...	...	...	...	...	...	...	1	...	...	3	...	...	·10	·14
	Bhuleshwar	...	3	...	2	1	1	1	...	...	1	...	1	...	...	10	...	...	·27	·21
	Khara Talao	1	...	...	...	...	...	...	...	1	1	1	...	...	...	3	...	...	·13	·36
	Kumbharwada	1	...	...	...	...	...	...	...	...	...	...	1	...	...	3	...	...	·10	·16
D	Khetwadi	...	1	1	...	1	...	1	1	2	1	...	2	...	...	10	...	...	·31	·21
	Girgaum	1	...	...	...	...	...	...	...	...	1	...	...	...	...	2	...	...	·06	·23
	Chowpati	1	1	...	...	...	1	...	...	...	...	...	...	...	...	3	...	...	·26	·24
	Walkeshwar	...	...	...	...	...	...	...	...	1	1	...	...	...	...	2	...	...	·18	·26
	Mahalakshmi	...	...	1	...	...	1	...	1	...	1	1	...	...	...	5	...	...	·19	·11
E	Mazagon	...	...	1	...	...	1	...	...	2	2	1	...	...	...	7	...	...	·23	·16
	Tarwadi	2	2	...	...	...	...	...	2	1	2	...	...	...	...	9	...	...	·31	·79
	2nd Nagpada	1	...	...	...	...	...	...	...	...	1	1	...	...	...	3	...	...	·13	·18
	Kamathipura	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	·02	·08
	Tardeo	2	...	...	...	1	1	...	...	3	1	...	2	...	...	0	...	...	·36	·10
	Byculla	3	1	1	2	...	...	2	2	3	1	...	...	...	...	15	...	...	·19	·10
	1st Nagpada	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·38
F	Parel	...	...	...	1	..	1	1	...	1	...	1	1	...	...	6	...	...	·13	·15
	Sewri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·11
	Sion	1	1	...	1	...	...	...	2	...	...	...	...	...	...	5	...	...	·16	·13
G	Mahim	...	...	...	...	...	...	...	...	...	1	2	1	...	...	4	...	...	·13	·09
	Worli	...	...	...	...	...	1	1	2	1	...	...	...	...	...	5	...	...	·05	·04
	Harbour, Docks, Railways and Homeless	...	...	...	...	2	...	2	...	...	2	1	1	...	...	8	...	...	·17	·20
	Total ...	28	17	10	14	14	16	10	23	22	26	19	14	145	68	213	·22	·20	·21	·31

TABLE of Deaths registered from ENTERIC FEVER by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·40
	Middle and Lower Colaba	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	·05	·33
	Fort, South ...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	3	...	...	·86	·82
	Fort, North ...	2	...	4	2	3	3	1	2	1	...	1	...	...	...	19	...	...	·74	·41
	Esplanade ...	1	...	...	...	2	...	1	...	...	...	...	2	...	...	6	...	...	·33	·33
B	Mandvi ...	...	...	...	1	...	...	3	1	...	...	1	...	...	...	6	...	...	·18	·08
	Chukla ...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	2	...	...	·08	·03
	Umarkhadi ...	...	1	2	...	2	...	...	...	...	...	...	...	...	...	5	...	...	·10	·14
	Dongri ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·06
C	Market ...	...	...	1	1	...	2	...	...	...	1	1	...	...	...	6	...	...	·19	·12
	Dhobi Talao ...	...	1	...	...	3	3	4	1	...	...	...	...	...	...	12	...	...	·31	·39
	Fanaswadi ...	...	1	1	1	...	2	1	...	...	...	...	...	...	...	6	...	...	·21	·21
	Bhuleshwar ...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	2	...	...	·05	·08
	Khara Talao ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·04
	Kumbharwada ...	1	...	...	...	...	...	...	1	...	1	...	...	...	...	3	...	...	·10	·06
D	Khetwadi ...	1	1	2	...	...	1	1	...	...	1	...	1	...	...	8	...	...	·25	·24
	Girgaum ...	1	...	...	3	...	1	...	...	1	...	...	...	...	...	6	...	...	·19	·30
	Chowpati ...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	·08	·33
	Walkeshwar ...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	·09	·08
	Mahalakshmi ...	...	...	1	1	...	...	...	1	2	...	...	...	...	...	5	...	...	·19	·19
E	Mazagon ...	1	...	...	...	...	...	2	1	1	1	1	1	...	...	8	...	...	·26	·16
	Tarwadi ...	1	...	1	1	...	2	...	...	1	...	1	...	...	...	7	...	...	·24	·21
	2nd Nagpada ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·04
	Kamathipura ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·02
	Tardeo ...	...	...	...	1	...	...	1	...	1	...	...	...	...	...	3	...	...	·10	·14
	Byculla ...	...	...	1	...	2	2	1	...	...	...	...	...	...	...	6	...	...	·07	·09
	1st Nagpada ...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	2	...	...	·31	·38
F	Parel ...	...	1	...	...	...	...	...	...	...	1	...	1	...	...	3	...	...	·06	·04
	Sewri ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....
	Sion ...	1	...	1	2	1	...	1	...	1	...	...	...	...	...	7	...	...	·22	·06
G	Mahim...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	2	...	...	·06	·06
	Worli ...	...	1	1	...	1	2	...	1	...	...	...	...	...	...	6	...	...	·06	·07
	Harbour, Docks, Railways and Homeless ...	1	...	1	...	2	...	...	...	3	...	2	2	...	...	11	...	...	·24	·12
	Total ...	10	8	16	13	18	19	18	9	13	7	8	8	101	46	147	·15	·13	·15	·14

TABLE of Deaths registered from Fevers (excluding Malarial and Enteric Fevers) by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of Population. Males.	Females.	Total.	Mean Ratio per 1,000 of Population during the previous 5 years.
A	Upper Colaba	3	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	1·92	1·22
	Middle and Lower Colaba	8	2	4	5	5	3	4	1	6	5	2	1	...	...	46	...	...	2·33	2·23
	Fort, South	...	...	1	...	...	...	...	...	...	...	1	1	...	...	3	...	...	·86	1·63
	Fort, North	13	5	7	8	3	2	4	...	11	1	7	5	...	...	66	..	...	2·59	4·26
	Esplanade	14	10	9	...	4	2	5	3	10	6	7	11	...	..	81	...	...	4·56	8·76
B	Mandvi	10	9	6	10	9	5	7	5	2	4	...	3	...	...	70	...	...	2·10	3·75
	Chukla	4	4	2	5	3	2	3	4	4	5	2	1	...	...	39	...	...	1·60	2·09
	Umarkhadi	13	18	19	10	11	7	6	17	11	9	4	3	...	...	128	...	...	2·80	2·41
	Dongri	18	13	14	10	11	5	4	3	3	4	1	4	...	...	90	...	...	3·30	3·16
C	Market	3	6	4	1	4	1	4	5	3	5	1	3	...	...	40	...	...	1·32	1·92
	Dhobi Talao	6	7	4	3	3	5	3	7	3	6	3	6	...	...	56	...	...	1·44	2·21
	Fanaswadi	4	5	9	2	3	1	3	3	4	7	2	4	...	...	47	...	...	1·71	1·84
	Bhuleshwar	5	4	5	5	5	6	3	2	2	3	3	3	...	...	46	...	...	1·26	1·83
	Khara Talao	4	5	4	3	5	3	4	3	3	1	5	2	...	...	42	...	...	1·82	2·32
	Kumbharwada	11	9	8	6	3	5	1	5	2	6	7	5	...	...	68	...	...	2·45	1·47
D	Khetwadi	4	3	5	4	7	2	6	3	6	5	1	1	...	...	47	...	...	1·47	1·34
	Girgaum	6	4	5	10	2	8	6	...	2	8	2	4	...	...	57	...	...	1·85	1·87
	Chowpati	...	2	1	5	1	1	1	...	2	1	1	1	...	...	16	...	...	1·40	·91
	Walkeshwar	...	2	...	...	1	1	...	...	...	4	...	1	...	...	9	..	...	·84	·61
	Mahalakshmi	8	3	1	4	5	...	3	8	3	6	3	3	...	...	47	...	...	1·78	2·61
E	Mazagon	23	27	28	31	23	19	13	19	10	4	6	6	...	...	209	...	...	6·94	4·67
	Tarwadi	17	18	27	23	15	14	14	20	18	12	13	9	...	...	200	...	...	7·03	5·58
	2nd Nagpada	3	5	5	10	8	4	7	1	4	3	3	4	...	...	57	...	...	2·62	5·89
	Kamathipura	13	20	24	10	12	7	10	7	9	9	7	11	...	...	139	...	...	3·78	4·93
	Tardeo	8	5	8	6	6	2	2	8	6	3	4	3	...	...	61	...	...	2·19	3·18
	Byculla	15	21	18	27	17	11	12	15	9	11	1	5	...	...	162	...	...	2·15	2·97
	1st Nagpada	...	1	2	3	1	...	4	...	2	1	...	1	...	...	15	...	...	2·33	2·70
F	Parel	7	14	31	28	16	14	18	26	10	10	12	9	...	...	195	...	...	4·28	3·40
	Sewri	13	9	8	10	10	4	6	6	6	1	7	9	...	...	89	...	...	4·66	3·53
	Sion	7	6	12	7	5	5	5	10	7	8	5	5	...	...	82	...	...	2·67	2·44
G	Mahim	4	8	3	4	7	6	3	1	3	6	5	5	...	...	55	...	...	1·80	1·30
	Worli	33	22	34	29	21	14	10	19	13	13	13	15	...	...	236	...	..	2·63	2·47
	Harbour, Docks, Railways and Homeless	1	3	3	2	1	...	...	3	1	...	2	...	...	...	16	...	...	·35	·42
	Total	278	270	311	281	227	159	171	204	175	167	130	144	1,579	938	2,517	2·46	2·76	2·56	2·74

TABLE of Deaths registered from DIARRHŒA and DYSENTERY by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Death Ratio per 1,000 of population. Females.	Death Ratio per 1,000 of population. Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	2	1	1	1	...	...	...	3	2	...	...	2	...	...	12	...	...	7·70	3·27
	Middle and Lower Colaba	4	2	5	2	...	...	2	5	2	1	2	4	...	...	29	...	...	1·47	2·84
	Fort, South	...	...	...	...	1	...	...	1	1	...	...	...	...	...	3	...	...	·86	1·09
	Fort, North	6	4	7	6	3	5	5	7	2	3	7	4	...	...	59	...	...	2·32	3·02
	Esplanade	18	14	6	12	4	4	5	5	12	8	7	18	...	...	113	...	...	6·36	4·97
B	Mandvi	8	3	7	9	5	4	4	13	5	1	3	2	...	...	64	...	...	1·92	1·81
	Chukla	5	3	...	6	1	6	2	5	7	3	5	...	...	...	43	...	...	1·77	1·90
	Umarkhadi	23	8	12	8	18	10	16	11	12	13	11	12	...	...	154	...	...	3·37	3·60
	Dongri	7	8	6	4	6	6	3	6	8	4	8	3	...	...	69	...	...	2·53	4·01
C	Market	3	2	5	4	6	2	4	4	1	6	4	2	...	...	43	...	...	1·42	1·76
	Dhobi Talao	10	6	10	9	6	9	5	10	6	8	3	5	...	...	87	...	...	2·24	2·58
	Fanaswadi	2	3	5	8	4	1	7	9	1	4	2	7	...	...	53	...	...	1·93	1·99
	Bhuleshwar	15	6	16	13	19	5	16	13	8	9	9	6	...	...	135	...	...	3·70	3·60
	Khara Talao	10	7	4	7	3	8	2	7	4	4	9	10	...	...	75	...	...	3·26	3·58
	Kumbharwada	7	9	8	7	7	4	...	7	7	6	5	10	...	...	77	...	...	2·77	2·82
D	Khetwadi	7	4	2	3	4	8	3	7	7	...	5	1	...	...	51	...	...	1·59	2·30
	Girgaum	4	5	4	1	3	2	1	6	4	3	3	1	...	...	37	...	...	1·20	1·80
	Chowpati	3	3	2	2	...	1	3	1	3	...	3	1	...	...	22	...	...	1·93	1·74
	Walkeshwar	1	1	2	1	...	1	1	3	1	1	...	...	...	...	12	...	...	1·12	1·22
	Mahalakshmi	7	5	9	11	5	7	6	12	5	5	7	2	...	...	81	...	...	3·07	3·54
E	Mazagon	14	14	11	18	15	16	12	15	15	4	8	15	...	...	157	...	...	5·22	3·84
	Tarwadi	19	19	22	17	17	14	13	24	19	17	10	15	...	...	206	...	...	7·24	7·72
	2nd Nagpada	4	8	8	6	6	7	6	14	3	2	3	7	...	...	74	...	...	3·41	5·58
	Kamathipura	7	18	12	14	15	10	7	16	11	9	7	10	...	...	136	...	...	3·70	3·71
	Tardeo	11	9	13	6	14	4	8	17	8	10	9	7	...	...	116	...	...	4·17	5·01
	Byculla	38	28	37	46	29	34	21	35	30	18	15	26	...	...	357	...	...	4·73	5·32
	1st Nagpada	2	1	1	1	3	2	2	...	2	1	2	...	...	...	17	...	...	2·65	3·08
F	Parel	13	19	14	8	14	7	8	14	14	8	8	4	...	...	131	...	...	2·88	3·62
	Sewri	8	11	10	6	9	5	14	10	10	3	3	7	...	...	96	...	...	5·03	4·76
	Sion	15	19	12	12	11	9	11	13	11	6	4	3	...	...	126	...	...	4·10	3·85
G	Mahim	17	14	13	18	9	12	16	22	16	7	10	7	...	...	161	...	...	5·28	4·45
	Worli	31	18	32	16	24	23	26	44	29	16	8	10	...	...	277	...	...	3·09	3·45
	Harbour, Docks, Railways and Homeless	6	3	...	...	1	...	...	...	1	1	5	12	...	...	29	...	...	·64	·27
	Total ...	327	275	296	282	262	226	229	359	267	181	185	213	1,708	1,394	3,102	2·66	4·11	3·16	3·41

TABLE of Deaths registered from TUBERCLE OF LUNGS and TUBERCULAR DISEASES by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Death Ratio per 1,000 of population. Females.	Death Ratio per 1,000 of population. Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	...	1	1	...	1	1	1	...	...	...	...	1	...	...	6	...	...	3·85	3·68
	Middle and Lower Colaba	5	...	1	4	...	...	...	...	1	1	2	1	...	...	15	...	...	·76	1·89
	Fort, South	1	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	·57	·82
	Fort, North	4	4	11	6	1	3	5	...	5	6	5	4	...	...	54	...	...	2·12	3·47
	Esplanade	4	5	8	5	4	1	2	3	6	5	3	10	...	...	56	...	...	3·15	3·51
B	Mandvi	8	10	6	11	5	4	4	2	7	8	5	4	...	...	74	...	...	2·22	2·10
	Chukla	11	12	9	13	6	8	11	7	4	9	2	10	...	...	102	...	...	4·20	3·61
	Umarkhadi	14	13	13	26	13	19	13	15	8	10	8	10	...	...	162	...	...	3·54	6·55
	Dongri	6	2	4	4	7	3	2	3	1	6	2	3	...	...	43	...	...	1·57	3·43
C	Market	2	3	5	3	2	1	2	4	1	1	3	6	...	...	33	...	...	1·09	2·04
	Dhobi Talao	1	5	4	7	3	9	2	8	4	3	4	8	...	...	58	...	...	1·49	1·90
	Fanaswadi	2	3	1	1	4	1	3	3	2	3	5	2	...	...	30	...	...	1·09	1·45
	Bhuleshwar	...	4	5	8	3	3	3	1	4	6	4	2	...	...	43	...	...	1·1	2·50
	Khara Talao	5	7	6	12	6	7	6	5	3	5	8	4	...	...	74	...	...	3·22	3·37
	Kumbharwada	8	5	9	8	7	12	11	7	6	5	3	5	...	...	86	...	...	3·10	2·82
D	Khetwadi	6	8	8	7	7	6	8	13	12	9	8	10	...	...	102	...	...	3·19	2·97
	Girgaum	8	7	4	4	7	7	11	6	4	3	8	4	...	...	75	...	...	2·43	3·21
	Chowpati	2	2	3	1	2	2	4	3	1	...	2	2	...	...	24	...	...	2·10	1·99
	Walkeshwar	1	1	2	1	6	2	3	...	...	1	2	...	...	...	19	...	...	1·78	1·22
	Mahalakshmi	3	5	4	3	1	6	7	4	3	3	...	4	...	...	43	...	...	1·63	1·56
E	Mazagon	2	1	2	4	3	2	...	...	3	2	2	...	...	...	21	...	...	·69	1·61
	Tarwadi	8	4	8	8	4	7	8	6	7	9	4	12	...	...	85	...	...	2·99	3·99
	2nd Nagpada	10	8	8	9	5	3	6	8	2	3	1	4	...	...	67	...	...	3·08	4·67
	Kamathipura	16	15	20	18	15	18	6	25	16	4	18	16	...	...	197	...	...	5·36	4·88
	Tardeo	8	10	9	4	7	9	10	6	7	6	10	11	...	...	97	...	...	3·49	3·25
	Byculla	6	10	17	8	5	4	3	9	4	7	2	4	...	...	79	...	...	1·04	1·65
	1st Nagpada	1	1	3	1	...	2	...	5	1	3	2	1	...	...	20	...	...	3·11	3·85
F	Parel	1	3	...	3	11	1	3	4	5	1	3	8	...	...	43	...	...	·94	2·27
	Sewri	1	2	...	1	1	...	2	...	...	1	1	1	...	...	10	...	...	·52	1·19
	Sion	4	...	1	2	...	3	1	4	3	3	4	1	...	...	26	...	...	·84	2·41
G	Mahim	5	5	3	5	1	3	5	1	4	6	2	4	...	...	44	...	...	1·44	2·37
	Worli	15	6	6	6	7	6	8	12	5	11	2	6	...	...	90	...	...	1·00	2·57
	Harbour, Docks, Railways and Homeless	1	...	...	...	...	...	...	...	1	3	...	4	...	...	9	...	...	·20	·10
	Total ...	169	162	181	193	144	155	150	164	130	153	126	162	946	943	1,889	1·47	2·78	1·92	2·72

TABLE of Deaths registered from RESPIRATORY DISEASES (excluding Phthisis) by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Death Ratio per 1,000 of population. Females.	Death Ratio per 1,000 of population. Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba ...	3	2	1	...	1	...	...	2	2	3	1	5	...	...	20	...	...	12·84	5·72
	Middle and Lower Colaba	9	19	15	14	16	16	9	15	9	12	7	6	...	...	147	...	...	7·46	7·13
	Fort, South ...	2	1	1	...	1	2	1	...	...	...	3	2	...	...	13	...	...	3·75	2·46
	Fort, North ...	33	23	40	27	26	17	23	19	11	11	18	11	...	...	262	...	...	10·69	7·40
	Esplanade ...	10	16	22	12	8	5	10	6	6	6	8	10	...	...	119	...	...	6·70	7·90
B	Mandvi ...	40	41	62	32	43	25	28	18	16	19	7	17	...	...	348	...	...	10·48	11·70
	Chukla ...	25	27	22	27	30	28	25	13	23	19	17	19	...	...	275	...	...	11·34	11·37
	Umarkhadi ...	55	74	67	56	53	51	48	45	33	35	38	30	...	...	585	...	...	12·80	11·58
	Dongri ...	37	42	41	19	28	19	30	15	6	19	13	12	...	...	281	...	...	10·31	11·49
C	Market ...	32	17	17	23	22	14	17	10	8	15	14	19	...	...	208	...	...	6·89	6·85
	Dhobi Talao ...	43	44	36	38	29	26	21	31	34	15	25	26	...	...	368	...	...	9·51	8·53
	Fanaswadi ...	15	18	24	26	14	14	19	14	14	23	19	8	...	...	208	...	...	7·59	7·32
	Bhuleshwar ...	39	38	40	39	34	31	27	26	28	25	15	27	...	...	369	...	...	10·12	10·69
	Khara Talao ...	28	21	24	28	26	14	14	21	21	6	11	14	...	...	228	...	...	9·92	11·39
	Kumbhárwada ...	27	24	27	24	21	19	30	22	19	13	22	17	...	...	265	...	...	9·56	9·92
D	Khetwadi ...	22	25	25	24	22	20	12	22	15	15	11	15	...	...	228	...	...	7·13	7·14
	Girgaum ...	36	23	18	23	22	18	19	19	9	17	17	17	...	...	238	...	...	7·73	8·04
	Chowpati ...	6	5	11	5	3	6	3	8	6	5	3	2	...	...	63	...	...	5·52	5·55
	Walkeshwar ...	8	9	7	6	7	2	4	6	8	3	5	4	...	...	69	...	...	6·48	4·27
	Mahalakshmi ...	14	16	19	15	11	13	8	12	9	4	11	4	...	...	136	...	...	5·17	6·00
E	Mazagon ...	21	40	46	33	33	19	21	25	13	23	22	14	...	...	310	...	...	10·30	9·73
	Tarwadi ...	33	36	40	30	29	28	17	32	24	20	23	14	...	...	326	...	...	11·46	11·57
	2nd Nagpada ...	17	20	24	34	29	33	24	25	11	17	7	12	...	...	253	...	...	11·65	11·50
	Kamathipura ...	44	42	46	38	33	19	17	26	20	20	22	24	...	...	351	...	...	9·55	11·59
	Tardeo ...	19	33	25	22	21	23	20	16	16	17	21	12	...	...	245	...	...	8·82	8·87
	Byculla ...	87	83	104	85	83	76	76	78	56	47	46	45	...	...	866	...	...	11·49	11·25
	1st Nagpada ...	4	3	5	6	4	9	10	5	6	3	1	2	...	...	58	...	...	9·04	8·87
F	Parel ...	27	32	44	45	44	25	31	45	29	21	8	16	...	...	367	...	...	8·07	12·65
	Sewri ...	18	6	17	18	20	10	16	10	7	4	7	9	...	...	137	...	...	7·18	7·51
	Sion ...	26	19	15	18	14	14	17	21	19	16	12	16	...	...	207	...	...	6·74	6·72
G	Mahim ...	39	32	41	35	26	20	20	26	27	27	15	17	...	...	325	...	...	10·65	9·23
	Worli ...	80	69	94	89	91	79	93	86	49	34	37	40	...	...	841	...	...	9·38	8·19
	Harbour, Docks, Railways and Homeless ...	1	...	...	1	...	2	...	7	2	2	3	...	...	...	18	...	...	·40	·40
	Total ...	900	903	1,020	887	844	697	710	726	556	516	489	486	4,945	3,789	8,734	7·72	11·17	8·91	8·80

TABLE of Deaths registered from INJURIES by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	...	1	...	...	...	1	...	...	1	...	...	1	...	...	4	...	...	2·56	·81
	Middle and Lower Colaba	...	1	...	1	1	2	2	2	1	1	...	...	...	...	11	...	...	·55	·78
	Fort, South	...	...	...	...	...	1	...	...	1	1	...	...	...	...	3	...	...	·86	·82
	Fort, North	1	...	1	5	2	1	2	1	1	1	2	3	...	...	20	...	...	·78	·93
	Esplanade	9	3	1	...	4	1	1	9	2	2	...	8	...	...	33	...	...	1·85	3·18
B	Mandvi	1	...	...	...	3	2	...	3	...	1	1	...	...	...	11	...	...	·33	·56
	Chukla	1	2	...	...	2	1	...	2	1	...	2	1	...	...	12	...	...	·49	·60
	Umarkhadi	3	1	1	...	1	4	2	...	1	2	3	2	...	...	20	...	...	·43	·67
	Dongri	2	2	1	1	...	4	3	...	...	1	2	2	...	...	18	...	...	·66	·61
C	Market	1	2	...	3	2	1	1	1	3	...	3	...	...	...	17	...	...	·56	·49
	Dhobi Talao	3	...	1	1	3	3	2	2	4	2	1	2	...	...	24	...	...	·62	·71
	Fanaswadi	1	...	1	...	1	1	4	2	...	...	...	2	...	...	12	...	...	·43	·42
	Bhuleshwar	...	9	3	2	3	...	...	1	1	2	...	1	...	...	22	...	...	·60	·56
	Khara Talao	2	3	...	1	...	2	3	1	3	3	2	...	...	...	20	...	...	·87	·69
	Kumbharwada	2	3	...	...	...	...	1	...	...	...	1	1	...	...	8	...	...	·28	·57
D	Khetwadi	3	4	1	3	2	2	1	...	6	3	...	2	...	...	27	...	...	·84	·64
	Girgaum	...	4	3	1	...	1	...	2	1	...	...	...	...	...	12	...	...	·38	·46
	Chowpati	3	...	...	...	2	1	...	1	1	1	1	2	...	...	12	...	...	1·05	·41
	Walkeshwar	...	2	...	...	1	2	2	...	1	...	2	2	...	...	12	...	...	1·12	·43
	Mahalakshmi	1	...	1	1	2	1	1	2	1	...	1	1	...	...	12	...	...	·45	·39
E	Mazagon	2	2	1	1	3	1	3	2	...	2	1	1	...	...	19	...	...	·63	·65
	Tarwadi	12	5	12	6	6	3	5	4	3	4	3	2	...	...	65	...	...	2·28	3·08
	2nd Nagpada	1	1	1	2	1	2	...	...	1	1	...	1	...	...	11	...	...	·50	·64
	Kamathipura	2	1	3	...	2	2	1	2	3	1	1	2	...	...	20	...	...	·54	·73
	Tardeo...	...	...	2	2	...	3	1	1	...	1	...	...	...	...	10	...	...	·36	·46
	Byculla	1	6	4	4	2	4	3	1	3	2	2	3	...	...	35	...	...	·46	·59
	1st Nagpada	...	1	1	1	...	1	...	...	1	...	1	...	...	...	6	...	...	·93	1·15
F	Parel	2	1	...	...	1	4	1	1	...	1	1	1	...	...	13	...	...	·28	·52
	Sewri	...	1	1	1	1	1	1	...	2	...	1	1	...	...	10	...	...	·52	·56
	Sion	1	3	1	5	1	3	1	2	1	3	2	4	...	...	27	...	...	·88	·62
G	Mahim	2	4	3	1	1	1	2	...	2	3	...	1	...	...	19	...	...	·62	·61
	Worli	4	4	3	6	1	6	1	2	4	4	...	3	...	...	36	...	...	·40	·45
	Harbour, Docks, Railways and Homeless	2	4	1	1	1	1	...	2	2	2	8	...	...	...	27	...	...	·60	·62
	Total ...	62	70	47	49	49	63	44	39	51	44	41	49	427	181	608	·66	·53	·62	·70

TABLE of Deaths registered from OTHER CAUSES by Section and Month in 1914.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Death Ratio per 1,000 of population. Females.	Death Ratio per 1,000 of population. Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	3	1	...	1	3	...	2	4	1	1	1	2	...	...	19	...	...	12·20	15·54
A	Middle and Lower Colaba	16	12	15	14	16	8	11	20	17	13	9	6	...	...	157	...	...	7·97	8·58
A	Fort, South	5	...	...	1	...	1	3	1	3	3	..	1	...	...	18	...	...	5·19	4·65
A	Fort, North	36	23	28	22	18	23	24	24	30	18	23	27	...	...	296	...	...	11·65	13·00
A	Esplanade	17	11	15	7	12	12	7	12	15	11	9	18	...	...	146	...	...	8·22	9·56
B	Mandvi	39	27	27	24	35	26	24	29	17	35	17	15	...	...	315	...	...	9·48	12·42
B	Chukla	26	30	23	33	38	25	31	23	19	18	18	18	...	...	302	...	...	12·46	16·13
B	Umarkhadi	74	71	66	69	70	63	65	73	75	58	67	50	...	...	801	...	...	17·53	14·22
B	Dongri	31	13	22	25	21	24	17	13	20	17	14	25	...	...	242	...	...	8·88	11·66
C	Market	22	21	16	19	14	14	15	17	18	19	17	12	...	...	204	...	...	6·76	9·55
C	Dhobi Talao	51	37	48	40	40	22	30	42	43	35	21	26	...	...	435	...	...	11·24	12·10
C	Fanaswadi	21	23	2	29	20	26	23	20	20	34	23	16	...	...	280	...	...	10·21	9·70
C	Bhuleshwar	51	42	61	39	51	45	39	43	28	28	25	31	...	...	483	...	...	13·24	13·19
C	Khara Talao	47	33	37	31	30	35	34	38	24	28	26	34	...	...	397	...	...	17·27	17·99
C	Kumbharwada	43	41	33	33	32	35	27	26	25	28	24	19	...	...	371	...	...	13·39	12·57
D	Khetwadi	34	32	28	31	31	32	37	39	21	33	20	27	...	...	365	...	...	11·42	10·95
D	Girgaum	31	29	40	34	26	25	34	26	31	31	29	27	...	...	363	...	...	11·79	12·83
D	Chowpati	12	11	16	5	13	11	10	9	11	10	8	11	...	...	127	...	...	11·14	10·12
D	Walkeshwar	7	4	13	12	11	9	8	7	10	6	8	14	...	...	109	...	...	10·24	7·85
D	Mahalakshmi	22	22	25	24	13	14	16	25	20	14	24	12	...	...	231	...	...	8·78	9·59
E	Mazagon	24	26	24	18	31	17	21	23	28	21	16	25	...	...	274	...	...	9·11	12·93
E	Tarwadi	33	30	34	34	30	24	32	44	43	43	41	43	...	...	431	...	...	15·16	17·70
E	2nd Nagpada	38	52	47	33	45	44	37	39	27	35	36	41	...	...	474	...	...	21·84	18·64
E	Kamathipura	47	55	47	48	47	39	33	70	44	49	44	34	...	...	557	...	...	15·15	17·08
E	Tardeo	34	28	29	38	31	35	25	27	42	25	25	24	...	...	383	...	...	13·79	13·24
E	Byculla	104	90	124	102	80	79	78	84	79	70	67	63	...	...	1,020	...	...	13·53	14·32
E	Ist Nagpada	5	5	6	7	3	6	9	8	8	3	4	2	...	...	66	...	...	10·28	15·12
F	Parel	35	36	39	27	36	20	29	40	34	26	20	27	...	...	369	...	...	8·11	10·24
F	Sewri	24	23	15	17	12	12	19	20	9	10	7	12	...	...	180	...	...	9·44	10·09
F	Sion	36	39	25	30	20	36	32	40	30	35	33	28	...	...	384	...	...	12·51	12·67
G	Mahim	21	29	33	33	19	28	32	30	27	19	26	33	...	...	330	...	...	10·82	10·27
G	Worli	84	78	64	75	64	54	73	68	69	73	50	61	...	...	813	...	...	9·07	9·52
	Harbour, Docks, Railways and Homeless	1	2	1	...	1	4	...	...	...	1	4	10	...	...	24	...	...	·53	·70
	Total ..	1,074	976	1,026	960	913	848	877	1,004	888	850	756	794	5,601	5,365	10,966	8·74	15·81	11·19	11·99

COMPARATIVE TABLE of Deaths from some of the PRINCIPAL CAUSES during 1914 and the preceding 5 years.

YEAR.	Cholera.		Small-pox.		Measles.		Plague.		Malaria.		Enteric Fever.		Other Fevers.		Diarrhœa and Dysentery.		Tubercle of Lungs including other Tubercular Diseases.		Respiratory Diseases.		Injuries.		All other Causes.		Total Deaths.	
	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.
1909 ...	727	·74	473	·48	75	·07	5,197	5·31	293	·29	92	·09	2,415	2·45	2,585	2·64	2,862	2·92	7,974	8·15	698	·71	11,487	11·74	34,878	35·66
1910 ...	107	·10	1,008	1·03	184	·18	3,656	3·73	293	·29	156	·15	2,664	2·72	3,352	3·42	2,839	2·90	8,212	8·39	761	·71	11,761	12·02	34,933	35·72
1911 ...	123	·12	443	·45	652	·66	4,006	4·09	334	·34	145	·14	2,667	2·72	3,075	3·13	2,694	2·75	8,640	8·82	702	·71	11,480	11·72	34,961	35·69
1912 ...	1,790	1·82	979	·99	210	·21	1,717	1·75	360	·36	152	·15	3,073	3·13	4,544	4·63	2,794	2·85	9,686	9·88	680	·69	12,969	13·24	38,954	39·77
1913 ...	125	·12	212	·21	222	·22	2,609	2·66	261	·26	154	·15	2,628	2·68	3,173	3·23	2,152	2·19	8,604	8·78	660	·67	11,006	11·23	31,806	32·47
Mean of the preceding 5 years.	574	·58	623	·63	269	·27	3,437	3·51	308	·31	140	·14	2,689	2·74	3,346	3·41	2,668	2·72	8,623	8·80	688	·70	11,741	11·99	35,106	35·86
1914 ..	221	·22	252	·25	263	·26	2,941	3·00	213	·21	147	·15	2,517	2·56	3,102	3·16	1,889	1·92	8,734	8·91	608	·62	10,966	11·19	31,853	32·52

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SPECIFIC CAUSES of DEATHS in 1914 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London.

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
	GENERAL DISEASES.													
1	Small-pox	16	26	49	55	36	17	11	9	9	...	10	14	253
2	Cow-pox	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Chicken-pox	...	...	...	1	...	...	...	...	...	...	...	...	1
4	Measles	48	60	65	45	23	8	5	5	...	1	1	2	263
8	Plague	59	119	465	1135	821	147	83	55	35	10	7	5	2,941
9	Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
10	Dengue	...	...	...	...	...	...	...	...	...	...	...	...	...
11	Influenza	...	...	...	...	...	...	...	1	1	1	...	...	3
12	Whooping Cough	1	1	1	...	1	...	1	1	...	1	2	1	10
13	Mumps	1	...	...	2	2	1	...	...	...	...	...	1	7
14	Diphtheria	...	...	...	...	...	...	...	2	...	...	...	...	2
15	Cerebro—Spinal Fever	3	1	...	1	...	...	...	...	1	...	...	...	6
16	Simple Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
17	Enteric Fever	10	8	16	13	18	19	18	9	13	7	8	8	147
18	Cholera	4	...	4	7	7	26	45	135	17	3	1	2	221
19	Choleraic Diarrhœa	...	...	...	...	...	...	...	...	...	...	...	...	...
20	Diarrhœa	227	206	216	210	213	164	154	233	153	139	137	149	2,192
21	Dysentery	100	69	80	72	49	62	75	126	114	42	48	64	901
23	Beri-Beri	...	...	...	...	...	...	...	...	...	...	...	...	...
24	Malarial Fever	28	17	10	14	14	16	10	23	22	26	19	14	213
	Ague and Remittent	278	270	311	281	227	159	171	204	175	167	130	144	2,517
25	Phagedæna	...	...	...	...	...	...	...	...	...	...	...	...	...
26	Erysipelas	...	1	...	1	1	...	...	1	...	...	3	...	7
27	Pyæmia	1	3	...	...	2	2	2	2	1	1	1	...	15
28	Septicæmia	3	3	5	4	8	3	4	10	2	3	2	3	50
	Puerperal	33	21	27	18	31	28	11	24	28	24	23	23	291
	Septic Disease (Inflamation) ...	2	2	...	...	...	1	1	1	2	...	...	...	9
	Blood Poisoning	...	1	2	2	1	...	...	...	...	1	1	2	10
	Septic Fever	1	2	2	2	3	3	2	2	...	1	2	1	21
	Vaccine Fever	...	...	...	...	...	...	...	1	...	...	...	...	1
29	Tetanus	9	2	10	12	5	9	13	3	6	2	6	7	84
	Idiopathic	...	1	...	...	...	...	...	...	...	...	1	...	2
	Coma	...	...	...	1	...	...	...	...	...	...	...	...	1
	Toxæmia	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tumour of Heart	1	...	...	...	...	...	...	...	...	...	...	...	1
	Pelvic Tumour of Benign Nature	1	...	...	1	...	...	...	...	...	...	...	...	2
30	Tubercle of Lungs	8	17	12	15	16	16	16	12	16	23	9	26	186
	Tuberculosis	15	11	16	16	13	17	11	17	14	19	11	16	176
	Other Tubercular Affections ...	11	15	15	24	12	14	15	20	16	20	18	13	193
	Scrofula	4	8	4	5	7	3	3	6	2	4	2	4	52
	Tabes Mesenterica	1	...	...	...	...	...	1	...	...	...	1	...	3
	Gonorrhœal Arthritis	...	...	...	1	...	...	...	...	...	...	...	...	1
31	Leprosy	4	7	5	3	3	9	6	7	6	5	4	9	68
	Cancer	4	4	9	2	8	6	5	5	4	9	9	3	68
33	Syphilis	2	3	7	2	...	3	1	4	...	4	5	4	35
	Secondary	1	5	4	...	4	1	1	1	5	...	3	9	34
	Tertiary	2	2	...	3	2	1	...	2	2	1	...	...	15
	Cachexia	...	...	...	...	...	...	...	1	...	...	...	...	1
	Syphilitic Thrombosis	...	...	...	...	...	...	...	...	...	...	...	...	...
	Paraplegia	...	...	...	...	...	...	...	...	...	...	...	...	...
	Syphilis Cirrhosis	...	...	...	...	...	...	1	...	...	...	...	...	1
35	Hydrophobia	1	1	2	...	...	...	2	3	2	1	1	1	14
36	Glanders	...	...	...	...	...	...	...	...	...	...	...	...	...
40	Worms	2	1	1	6	...	2	4	...	2	...	...	3	21
54	Scurvy	1	...	...	...	...	1	...	1	...	1	...	...	4
58	Rheumatic Fever	...	1	...	...	1	1	1	1	...	...	...	1	6
59	Rheumatism	4	5	6	5	5	6	9	6	10	9	4	5	74
	Syphilitic	2	...	...	2	...	...	...	...	3	...	3	...	10
63	New Growth Non-Malignant ...	...	...	...	...	...	2	1	...	...	2	...	...	5
	Filariasis	...	...	...	...	...	...	...	...	...	...	...	...	...
64	New Growth, Malignant	...	1	1	...	1	...	1	...	1	...	...	1	6
	Endothelioma	...	...	...	...	...	...	...	...	...	...	...	...	...
	Terotoma	...	...	...	...	1	...	...	...	...	...	...	...	1
	Sarcoma (Abdomin)	...	...	1	...	2	1	1	1	...	...	1	...	7
65	Rickets	95	99	90	102	94	83	91	102	81	62	63	57	989
68	Anæmia	57	53	56	51	43	63	39	56	37	36	30	32	533
69	Chlorosis	...	...	...	...	...	...	...	...	...	...	...	...	...
70	Pernicious Anæmia	13	8	20	16	9	11	14	9	14	15	11	11	151
	Severe Anæmia	1	...	...	...	...	...	...	...	...	...	...	1	2

20—*continued.*

SPECIFIC CAUSES of DEATHS in 1914 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*continued.*

—	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
72	Leuchæmia	..	1	...	..	...	1	...	...	..	..	..	...	2
	Growth Larynx	...	...	...	...	...	...	...	...	1	..	..	..	1
	Sarcoma Maxilla	...	...	...	...	...	...	...	...	...	...	...	..	...
	Gout	...	...	1	...	1	...	...	...	...	...	...	...	2
	Uterine Myoma	...	...	...	...	...	...	...	...	...	...	...	1	1
75	Diabetes Mellitus	4	4	5	2	1	4	6	4	1	7	1	2	41
	Diabetic Coma	1	1	...	...	...	...	...	...	...	1	...	...	3
	Diabetic Gangrene	...	...	...	...	...	1	...	...	...	...	...	...	1
77	Immaturity at Birth	16	11	13	8	16	14	17	19	21	20	15	17	187
	Malnutrition	...	...	...	...	...	...	...	...	...	...	...	...	...
79	Debility	224	192	191	170	165	140	189	249	200	199	182	160	2,261
80	Old Age	191	193	185	153	136	114	106	141	140	145	129	139	1,772
	DISEASES OF THE NERVOUS SYSTEM.													
83	Meningitis	6	4	6	15	10	9	8	2	4	10	1	4	79
	Cerebral Meningitis	1	...	...	1	2	...	1	1	...	2	2	1	11
	Cerebro-Spinal Meningitis ...	2	7	3	3	1	5	1	3	2	1	1	...	29
85	Myelitis	...	1	1	...	1	...	1	...	3	...	...	...	7
	Loco-motor Ataxy	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arterio Sclerosis	...	...	...	...	2	...	...	1	...	...	1	...	4
	Icterus Neonatorum...	...	...	...	...	1	...	...	1	...	...	...	...	2
	Talus Dorsalis	...	...	...	...	...	...	...	...	...	...	...	...	...
90	Hæmorrhage	1	...	1	1	1	...	...	...	...	...	...	1	5
	„ lateral Ventricle ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	„ in the brain	...	...	...	...	...	...	...	...	...	...	...	...	...
	„ Spinal Cord	1	...	...	..	...	...	...	...	...	...	...	...	1
	„ Subdural	...	...	...	...	...	...	...	...	...	...	...	...	...
95	Cerebral Fever	1	1	...	...	...	...	...	...	...	1	...	...	3
	„ Hæmorrhage	8	5	6	5	8	5	4	5	5	5	3	4	63
	Sea Sickness Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
97	Congestion	...	1	...	...	...	...	...	...	...	1	...	...	2
	Brain Fever	...	...	...	...	...	1	...	...	...	...	1	1	3
	Thrombosis Cerebral	...	1	...	...	...	...	...	2	...	...	...	...	3
101	Hydrocephalus	...	...	...	...	...	...	...	...	...	...	...	...	...
102	Apoplexy	4	1	2	...	2	3	...	2	2	...	1	1	18
	Cerebral Apoplexy	...	1	2	4	2	...	1	1	2	...	...	1	14
103	Paralysis	12	5	5	16	4	5	1	6	9	7	3	8	81
	Paraplegia	1	1	3	1	2	...	1	1	1	1	1	3	16
	Hemiplegia	3	9	10	8	8	7	11	6	17	9	10	8	106
117	Eclampsia	1	...	...	...	...	...	...	...	...	...	1	...	2
	„ Infantile	139	134	137	141	145	141	123	105	93	100	73	88	1,419
	„ Puerperal	...	5	2	1	2	3	...	1	2	5	...	4	25
118	Epilepsy	5	2	2	4	1	1	...	3	1	2	...	...	21
	„ Fits...	...	...	1	...	...	...	1	2	...	..	...	1	5
120	Tetany	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arsenical Neurities...	...	...	...	1	1	...	...	...	...	...	...	...	2
127	Hysteria	1	...	1	...	...	...	1	1	1	1	1	1	8
135	Nervous Weakness	...	...	...	...	...	...	1	...	...	..	1	...	2
136	Cretenoid Idiocy	...	...	...	...	...	1	...	...	..	..	...	...	1
137	Mania	...	...	...	...	1	...	...	...	...	...	...	...	1
138	Melancholia	1	...	...	...	...	1	...	...	...	...	...	...	2
139	Dementia	...	...	...	1	...	1	...	...	1	...	...	...	3
	Spasm of Glottis	...	...	1	...	...	...	...	...	...	...	...	...	1
	DISEASES OF THE EYE, EAR & NOSE.													
	Epilaxis	...	...	...	...	...	...	...	...	...	...	...	1	1
143	Ophthalmia	...	...	...	...	...	...	...	...	...	...	...	...	...
	Otorrhœa	1	...	...	...	...	...	...	...	...	...	...	...	1
	Olitis Media	1	...	...	...	...	...	...	...	...	...	...	...	1
	Mastoid Abscess	...	...	...	...	...	1	...	...	...	...	...	...	1
185	Panophthalmitis	...	...	...	...	...	...	...	..	...	...	...	...	...
	Inflammation of Internal Ear ...	...	...	...	...	...	...	...	1	...	...	...	...	1

20—*continued.*

SPECIFIC CAUSES of DEATHS in 1914 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*continued.*

—	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
	DISEASES OF THE CIRCULATORY SYSTEM.													
252	Pericarditis	...	...	...	...	...	...	1	...	...	1	...	...	2
258	Endocarditis	1	...	...	...	...	...	1	...	...	1	...	...	3
	Rheumatic	...	...	...	...	...	...	...	...	...	...	...	...	...
259	Valvular Disease of Heart... ...	12	11	10	11	11	10	11	12	12	11	14	14	139
	Abdominal Aneurysm	...	...	...	...	1	...	...	...	...	...	...	...	1
	Mitral and Aortic Regurgitation...	1	2	1	2	3	...	...	...	...	2	2	2	15
	Aneurism of the Arch of Aorta ...	1	...	...	...	...	...	...	2	...	1	...	...	4
	Mitral incompetency	...	...	1	...	...	...	...	...	...	...	...	...	1
	Thoracic Aneurysm	1	...	...	...	...	...	...	...		...	...	...	1
	Mitral Stenosis and Regurgitation.	...	...	...	...	...	1	...	...	...	...	...	...	1
	Atheroma	...	...	2	...	...	...	...	...	...	...	...	...	2
	Aneurysm of Cardiac Axis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
260	Myocarditis	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ulcerative Endocarditis	1	...	...	...	...	...	...	...	...	...	...	...	1
	Phlegmasia Alba Dolens	...	...	...	...	...	...	...	...	...	1	...	1	2
261	Cardiac Asthma	1	1	...	...	...	...	2	1	...	...	...	1	6
	„ Debility	...	...	...	...	...	...	...	...	...	...	...	...	...
	„ Dropsy	1	...	...	1	...	...	...	...	...	...	...	...	2
264	Dilatation of Heart...	...	...	...	2	1	...	...	1	...	...	1	...	5
265	Fatty Heart	...	...	...	1	...	1	...	...	...	...	2	1	5
266	Aneurysm of Heart...	...	...	...	...	...	1	...	1	...	...	...	...	2
269	Pulmonary Embolism	1	...	...	...	1	...	...	1	...	...	...	...	3
271	Angina Pectoris	3	1	3	...	1	3	4	3	1	2	2	...	23
272	Syncope	2	...	...	1	1	1	1	...	1	...	...	1	8
	Heart failure	7	6	5	8	3	5	2	9	5	5	4	7	66
	Morbus Cordis	...	1	...	...	...	...	...	...	...	...	...	...	1
276	Degeneration of Coronary Arteries.	...	...	...	...	...	...	...	...	...	...	1	...	1
280	Aneurysm	...	...	...	...	...	...	...	...	...	...	...	...	...
284	Rupture of Aneurysm of Aorta ...	...	...	1	...	...	...	...	...	...	...	...	...	1
288	Obstruction of the portal vein ...	...	...	...	...	...	...	...	...	...	...	...	...	...
290	Thrombosis of Cerebral Arteries ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	DISEASES OF THE RESPIRATORY SYSTEM.													
302	Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...
	Laryngial Stricture	...	...	...	...	...	...	...	...	...	...	...	...	...
315	Bronchitis	119	117	138	139	155	149	133	150	103	81	73	62	1,419
	„ Catarrhal	1	1	...	...	...	...	...	...	...	...	...	...	2
	„ Capillary	90	93	97	88	98	84	94	71	41	47	40	29	872
	„ (Acute or Chronic) ...	120	105	101	106	95	57	77	76	102	72	64	79	1,054
322	Spasmodic Asthma	109	122	131	146	130	82	90	118	94	112	78	113	1,325
	DISEASES OF LUNGS.													
323	Congestion	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hæmoptysis	...	...	...	...	...	...	...	...	...	...	...	...	...
	Atelectasis	...	...	...	...	...	...	...	...	...	...	...	...	...
	Difficulty of breathing	...	...	...	...	...	...	...	...	...	...	...	...	...
325	Œdema	...	...	...	...	...	...	...	...	...	...	...	...	...
	„ of lungs	1	4	...	...	...	...	...	...	...	...	...	...	5
	Asphyxia Livida	...	1	...	...	...	...	...	...	...	...	...	...	1
326	Pneumonia	277	275	355	269	225	160	154	148	107	102	114	107	2,293
	„ Lobar	2	3	5	2	3	1	4	5	1	...	1	4	31
	„ Double	7	11	7	4	1	5	2	4	3	3	2	8	57
	„ Pleuro	1	1	...	3	2	...	1	...	...	1	...	...	8
	„ Catarrhal	...	...	...	...	...	...	...	...	...	...	...	...	...
	„ Croupous	...	1	2	...	1	...	...	...	...	...	...	...	4
327	Broncho-Pneumonia	144	154	175	123	125	149	143	143	100	93	96	79	1,524
334	Phthisis	135	119	138	138	103	108	108	115	84	91	88	107	1,334
335	Emphysema	12	...	2	2	1	...	1	6	2	3	4	3	36

20—*continued.*

SPECIFIC CAUSES of DEATHS in 1914 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*continued.*

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
	DISEASES OF THE PLEURA.													
339	Pleurisy	...	...	...	...	...	...	...	...	...	...	...	...	...
	„ with effusion	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pleurodyna	...	...	...	...	...	...	...	...	...	...	...	...	...
343	Pneumothorax	...	...	...	...	...	...	...	1	...	1	...	...	2
	DISEASES OF THE DIGESTIVE SYSTEM													
348	Stomatitis	...	...	...	...	...	...	2	1	...	...	...	...	3
350	Cancrum Oris	...	...	...	...	...	...	...	...	...	...	...	...	...
	Thrush	...	...	...	...	...	...	...	...	...	...	...	...	...
353	Disorders of Dentition	16	15	20	23	25	17	19	29	27	16	8	18	233
387	Tonsillitis	1	2	...	...	1	...	...	...	...	...	...	...	4
399	Stricture of Œsophagus	...	...	...	1	...	1	...	...	...	...	...	...	2
402	Gastritis	...	...	...	1	1	...	...	...	...	...	...	...	2
403	Gastric Ulceration	2	...	...	1	...	...	1	1	...	1	...	...	6
	Bowel Complaint	1	...	...	...	...	1	...	...	...	...	...	...	2
414	Gastro-Enteritis	5	4	3	4	7	5	3	14	4	2	2	4	57
416	Stricture of Stomach	...	2	...	...	...	...	...	...	...	1	...	...	3
419	Dyspepsia	3	1	1	...	1	...	1	3	4	...	1	1	16
	„ Acute	...	...	...	...	...	...	...	...	...	...	...	...	...
426	Vomiting „	...	...	...	...	...	...	...	...	...	...	...	2	2
	Infantile Biliary Cirrhosis... ...	...	...	...	...	1	...	...	...	1	...	1	...	3
	Intestinal Toxæmia...	...	...	...	...	1	...	...	...	1	1	1	...	4
	Pharyngitis	...	...	...	...	...	...	...	...	...	1	...	...	1
	Hepatic Pneumonia	1	...	...	...	...	...	...	...	...	...	...	...	1
	Gangrene Mouth	...	1	...	...	...	...	...	...	...	...	...	...	1
433	Inflammation of Intestines ...	...	...	...	...	...	...	...	1	1	1	...	1	4
	Enteritis	7	5	13	5	5	7	16	13	9	8	7	6	101
	Muco-Enteritis	1	...	...	...	1	...	...	...	...	...	...	...	2
	Entrocolitis	...	...	...	...	...	...	...	2	1	1	...	...	4
	Colitis	2	...	1	1	...	1	2	1	1	...	2	...	11
	Appendicitis	4	2	...	2	...	3	1	1	...	1	1	...	15
	Muco-Colitis...	...	...	...	...	...	...	...	...	...	...	...	...	...
434	Ulceration Duodenal	...	...	...	...	...	...	...	...	...	...	...	...	...
444	Sprue	10	11	15	15	10	5	7	14	6	8	6	11	118
445	Hernia	...	...	1	...	1	...	...	...	...	...	...	...	2
	Inguinal	...	...	...	...	...	1	...	1	2	...	...	1	5
	„ Strangulated	...	2	3	2	3	1	5	...	...	...	...	2	18
453	Intestinal obstruction	5	...	1	3	3	5	4	5	2	3	...	1	32
455	Perforation	...	...	...	...	...	...	1	...	1	...	1	1	4
461	Colic	1	1	1	...	...	...	1	...	1	1	1	...	7
466	Ulceration of Rectum	...	...	1	...	...	...	...	1	...	...	...	...	2
	„ „ Intestines	...	...	1	1	1	...	...	1	...	...	1	...	5
	Iliac Atsuss Septicæmia	...	...	...	1	...	...	...	...	...	...	...	...	1
468	Fistula in ano	...	...	1	...	1	...	...	1	...	...	...	...	3
	Ischio and Rectal Abscess	...	...	...	...	...	...	1	...	...	...	1	...	2
475	Prolapse of Rectum...	...	...	...	...	...	...	...	...	...	...	...	...	...
477	Piles	...	2	3	2	3	2	2	...	...	2	2	2	20
	Hæmorrhoids bleeding	1	...	1	1	...	1	...	1	...	...	...	1	6
479	Hepatitis	22	23	21	19	16	12	25	13	12	16	13	11	203
	Cirrhosis of liver	6	5	3	4	6	8	10	4	4	4	4	5	63
	Enlargement of liver	3	2	1	2	...	...	1	...	1	...	...	1	11
	Liver Abscess	5	2	1	3	2	1	3	4	3	3	2	2	31
	Hepatic Abscess	4	...	2	1	1	2	2	1	1	3	...	4	21
	Liver Complaint	1	1	...	...	...	1	...	...	1	1	...	...	5
	Liver Inflammation	1	...	...	1	...	1	...	...	...	...	...	...	3
	Appendicular Abscess	1	1	...	...	...	1	...	...	...	...	1	...	4
	Yellow Atrophy of Liver	2	1	1	...	1	...	1	...	...	...	...	...	6
	Ascites	1	...	3	...	2	2	3	...	1	...	2	1	15
	Intersseception	...	...	...	...	...	1	...	...	1	...	1	...	3

20—*continued.*

SPECIFIC CAUSES of DEATHS in 1914 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*continued.*

	CAUSES OF DEATHS	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
	Pyorrhea Alveotis	1	...	...	...	...	...	...	...	...	...	...	1	2
481	Congestion of liver...	...	3	1	...	...	...	...	1	...	...	...	1	6
	Hypertrophic Cirrhosis of liver ...	...	...	...	...	...	...	...	...	...	...	...	...	...
484	Atrophy of liver	...	...	...	...	...	...	...	...	...	...	...	...	...
486	Jaundice	3	1	4	3	3	2	4	3	3	1	4	3	34
498	Hæmorrhage of the Pancrea ...	...	...	...	...	...	...	...	1	...	...	...	...	1
502	Peritonitis	2	3	3	1	1	3	4	4	6	...	3	3	38
	Perinium Abscess	...	...	1	...	...	...	...	...	...	...	1	...	2
	Suppurative Peritonitis	...	...	...	...	...	...	1	...	...	...	...	...	1
	Peritonitis Puerperal	...	...	...	...	...	...	...	...	...	...	...	...	...
	Peritonitis Perforative	...	...	...	...	...	...	...	1	...	...	...	...	1
503	Dropsy	4	2	2	1	3	...	2	3	4	3	3	3	30
	DISEASES OF THE LYMPHATIC SYSTEM.													
506	Spleen enlargement	1	...	...	...	...	...	...	...	...	...	...	...	1
518	Lymphangitis	...	...	...	...	...	...	...	...	...	...	...	...	...
522	Elephantiasis	...	...	1	...	...	...	...	1	1	...	...	1	4
526	Thymic enlargement	...	...	...	...	...	...	...	...	...	...	...	...	...
528	Inflammation of the Thyroid ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	DISEASES OF THE URINARY SYSTEM.													
538	Acute nephritis	1	2	3	4	7	3	2	8	4	1	8	6	49
539	Bright's disease	19	17	20	19	10	10	12	19	18	12	23	16	195
	Granular kidney	1	2	1	...	1	...	1	...	...	1	1	...	8
	Renal colic	...	...	...	...	...	...	1	...	1	...	...	...	2
	Kidney disease	2	1	1	2	1	2	1	...	...	...	1	...	11
	Hydro-pyo-nephrosis	1	...	...	...	...	...	...	...	...	...	...	...	1
	Pyo-Nephritis	...	...	...	...	...	...	...	...	...	...	...	...	...
541	Pyelitis	1	...	...	...	...	...	...	...	1	...	...	...	2
552	Suppression of Urine	...	2	1	...	...	1	1	...	...	...	...	...	5
	Uræmia	2	2	...	3	1	1	3	...	1	4	2	1	20
	Coma	...	...	...	...	...	...	...	...	...	...	...	...	...
	Intoxication	...	...	...	...	...	...	...	...	...	...	...	...	...
556	Albuminuria	1	...	2	1	1	1	...	1	2	1	2	2	14
561	Cystitis	2	1	1	...	1	1	...	1	...	2	...	...	9
	Dropsy Renal	...	...	...	...	...	...	...	...	1	...	...	...	1
563	Sloughing of bladder	...	...	...	1	...	1	1	...	...	...	...	...	3
572	Calculus Vesical	...	...	...	...	...	...	...	...	...	1	...	...	1
574	Retention of Urine	...	...	...	...	...	...	...	...	...	...	...	...	...
	DISEASES OF THE GENERATIVE SYSTEM.													
578	Abscess Urethral	...	...	...	...	...	...	...	...	...	...	...	...	...
581	Stricture Urethra	...	...	1	1	...	...	...	...	...	...	...	...	2
585	Extravasation of urine	2	...	...	1	1	1	...	1	2	...	...	1	9
587	Prostatitis	...	...	...	...	...	1	...	...	...	...	...	...	1
591	Enlarged prostate	...	...	...	...	...	1	...	1	...	...	...	...	2
604	Gangrene Penis	...	...	...	...	...	...	...	...	...	...	...	...	...
610	Abscess scrotum	...	...	...	1	...	...	1	1	...	...	...	...	3
	Gangrene „	...	...	...	...	...	1	1	1	1	1	...	1	7
611	Sloughing scrotum	...	...	...	...	...	...	1	...	1	...	...	...	2
617	Hydrocele	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ovarian disease	1	...	...	...	...	1	...	...	...	...	...	...	2
639	Salpingitis	...	...	...	...	...	...	...	...	...	...	...	...	...
640	Pyosalpinx	...	...	...	...	...	...	...	...	...	1	...	...	1

20—*continued.*

SPECIFIC CAUSES of DEATHS in 1914 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*continued.*

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
650	Abscess Pelvic	...	...	1	...	...	...	...	...	...	1	...	...	2
	Pelvic Peritonitis	...	...	...	...	...	...	...	...	1	...	...	...	1
	" Cellulitis	1	...	...	...	...	...	1	...	...	...	...	...	2
651	Rupture of Uterus during labour	...	...	...	...	1	1	...	...	...	1	...	1	4
	Tubal Rupture	...	...	...	...	...	...	...	...	...	...	...	...	...
687	Leucorrhœa	...	...	1	...	...	...	2	...	...	...	...	...	3
	Menorrhagia	...	...	...	...	...	...	...	...	...	1	...	...	1
	Pregnancy	...	...	...	...	...	1	...	1	1	...	1	1	5
699	Hæmorrhage uterine	...	...	...	...	...	1	...	...	1	...	...	...	2
700	Abortion	...	1	...	...	2	1	1	1	1	...	...	...	7
	Child-birth	...	1	...	...	...	...	...	...	...	1	...	1	3
	Extra uterine gestation	...	...	...	...	...	...	...	...	...	1	...	...	1
	Para Metritis Chronic	...	...	...	...	...	...	1	...	...	1	1	...	3
709	Pregnancy accidental Hæmorrhage	...	...	...	...	...	...	1	1	...	...	...	2	4
	Retention of the placenta	...	...	...	...	...	...	...	...	...	...	...	...	...
	Placenta prævia	...	...	1	1	...	...	...	1	3	1	...	...	7
	Labour and exhaustion	2	1	...	1	1	1	1	1	2	1	...	2	13
	Debility after Labour	1	1	3	4	1	...	1	1	1	1	1	3	18
	Congenetal Phimoses	...	...	...	...	...	...	...	...	1	...	...	...	1
	Endometrites of Uteris	...	...	...	...	...	...	...	...	...	1	...	...	1
	Prolapses Uttri	...	...	...	...	...	...	...	1	...	...	...	...	1
	Uterine Filcom	...	...	...	...	...	...	...	1	...	...	...	...	1
	Pain in the womb	...	...	...	...	...	...	...	...	...	...	...	...	...
712	Still-birth	144	119	113	132	106	107	139	154	171	139	130	117	1,561
713	Asphyxia of infant	...	...	...	...	...	...	...	...	...	...	...	...	...
	Obstructed labour	...	...	...	...	1	...	...	1	...	1	1	...	4
714	Post-partum hæmorrhage	...	1	1	2	2	1	2	1	1	1	2	2	16
	Suppurating Heamatoceb	...	...	1	...	...	...	...	...	...	...	...	...	1
	Premature labour	...	...	...	...	1	...	...	...	...	...	...	...	1
	Difficult "	...	...	3	1	2	1	...	...	...	1	1	...	9
718	Sudden death after delivery	...	...	...	...	1	...	...	...	...	...	1	...	2
	Fibro Myoma Uteri	...	...	...	1	...	...	...	1	...	...	...	1	3
	DISEASES OF THE ORGANS OF LOCOMOTION AND CONNECTIVE TISSUE.													
734	Chronic Abscess	1	1	1	3	1	2	...	1	1	...	...	...	11
	Sloughing glands in the axilla	...	...	...	...	1	...	...	...	...	...	...	...	1
735	Caries	...	...	1	1	...	...	...	...	1	...	1	...	4
	Sinus	1	...	1	...	1	...	...	...	1	...	...	...	4
746	Arthritis	...	...	...	...	...	...	...	...	...	...	...	...	...
	Suppuration	...	...	...	...	...	...	...	...	...	...	1	...	1
	Synovitis	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ankylotomiasis	...	...	...	...	...	...	...	...	...	1	...	...	1
749	Ankylosis	...	...	...	...	...	...	...	...	...	...	...	...	...
753	Dislocation of hip joint	...	1	...	...	...	...	...	...	...	...	...	...	1
760	Caries of spine	...	...	...	...	...	...	...	...	...	...	...	...	...
761	Necrosis	...	...	...	...	...	...	...	...	...	1	...	...	1
762	Psoas, lumbar, post-pharyngeal and other abscesses	...	...	...	...	...	...	...	...	...	...	...	...	...

20—*concluded.*

SPECIFIC CAUSES of DEATHS in 1914 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*concluded.*

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
763	Pott's disease...	...	...	...	...	...	1	...	...	...	...	...	...	1
798	Cellulitis	...	...	1	1	1	1	1	2	2	...	...	1	10
	Diffused septic	...	...	...	...	...	...	...	...	...	...	...	1	1
799	Abscess	1	1	2	1	1	1	1	1	2	...	...	4	15
800	Gangrene	2	2	2	2	2	1	1	...	...	...	1	2	15
802	Anasarca	1	...	...	...	...	...	...	...	...	...	...	...	1
	Abscess Breast	...	...	1	...	...	...	...	1	...	...	...	...	2
	Ulcer near the ear	...	...	...	...	...	...	...	1	...	...	...	...	1
	Abscess Scalf	...	...	...	...	...	...	...	1	...	...	...	...	1
	Ostis Myoitis Tibia	...	...	...	...	...	...	...	...	...	...	1	...	1
	OTHER LOCAL DISEASES.													
811	Eczema	...	...	...	...	...	...	...	...	...	...	...	...	...
820	Pemphigus	...	...	...	...	...	...	...	...	...	1	...	1	2
846	Carbuncle	...	1	1	...	...	2	1	1	1	...	1	...	8
	Ulcer leg	1	1	1	...	...	...	...	1	...	...	1	1	6
	Sloughing Ulcer	...	...	...	...	...	1	...	1	...	1	...	...	3
	Drowning	7	11	3	6	7	11	4	7	8	7	6	1	77
	Burns and Scalds	10	19	6	6	4	1	2	...	...	...	...	...	48
	Privation and Starvation	14	13	11	5	5	2	3	4	4	6	4	10	81
	Vehicles, Horses and Bullocks ...	1	3	5	3	...	...	...	...	...	...	...	...	12
	Ships, Boats and Docks, excluding drowning	1	...	...	...	...	...	...	...	...	...	...	...	1
	Building operations...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Fall from houses, trees, stairs, &c. .	3	1	1	4	...	...	...	...	...	...	...	...	9
	Sunstroke	...	...	...	2	...	2	...	...	...	...	...	...	4
	Machinery	3	1	2	...	...	...	...	...	...	...	...	...	6
	Suffocation and strangulation ...	2	1	1	...	...	...	...	...	...	...	...	...	4
	Otherwise or not stated	1	3	3	2	...	...	...	...	...	...	...	...	9
	Incised penetrating and multiple wounds	12	10	8	12	...	...	...	...	...	...	...	...	42
	Suicides other than drowning and poisoning	2	1	3	...	...	...	...	...	...	...	...	...	6
	Fall of earth, rocks, stones, bales, trees, &c., on body	2	2	...	...	...	...	...	...	...	...	...	...	4
	Gunshot wounds	...	1	...	2	...	...	...	...	...	...	...	...	3
	Poisons, poisonous vapours and animals	2	3	3	4	6	12	7	5	4	7	4	4	61
	Heat Apoplexy	1	...	...	...	1	1	...	...	...	...	...	...	3
	Explosions	...	...	...	...	...	...	...	...	...	...	...	...	...
	Unspecified causes	1	1	1	3	...	...	...	...	...	...	...	...	6

TABLE of VACCINE OPERATIONS performed in the City of Bombay in 1914.

Ward.	SECTION.	Population (Census of 1911).	Number of Depôts in each District.	Number of Vaccinators in each District.	Number of persons vaccinated.			Average number of persons vaccinated by each Vaccinator.	Primary Vaccinations.								Re-vaccinations.			Percentage of successful cases where results were known.		Persons successfully vaccinated per 1,000 of population.	Average annual number of persons successfully vaccinated during the past 5 years.		Average annual number of deaths from Small-pox during the past 5 years.		Average cost of each successful Vaccination.
									Total.			Successful.															
					Males.	Females.	Total.		Males.	Females.	Total.	Under one year.	One year and under 6 years.	6 years and above.	Total.	Unknown.	Total.	Successful.	Unknown.	Primary Vaccinations.	Re-vaccinations.		Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
																											Rs. a.
A	Upper Colaba	1,557	1	1	431	269	700		215	226	441	325	67	2	394	33	259	2	253	96·57	33·33	18·65	377	17·75	...	...	
	Middle and Lower Colaba	19,679																							4	·22	
	Fort, South...	3,462	1		465	318	783		254	284	538	422	77	9	508	16	245	10	227	97·32	95·56	18·02	486	16·84	1	·27	
	Fort, North	25,400																							13	·48	
	Esplanade	17,761	...		6,004	1,328	7,332		105	88	193	106	24	...	130	57	7,139	...	7,136	95·59	.....	7·33	140	7·88	5	·33	
B	Mandvi	33,202	1		200	281	481		193	281	474	329	64	2	395	61	7	...	7	95·64	.....	11·90	412	12·41	13	·36	
	Chukla	24,231			205	228	433		205	228	433	316	67	2	385	38	...	...	...	97·47	.....	15 89	472	19 48	7	·26	
	Umerkhadi	45,679	1	1	440	497	937		423	492	915	675	140	4	819	56	22	...	22	95·34	.....	17·93	853	18·70	25	·51	
	Dongri	27,246			294	308	602		286	308	594	470	51	1	522	40	8	...	8	94·22	.....	19·16	750	27·53	12	·40	
C	Market	30,172			289	241	530		195	215	410	255	95	...	350	42	120	...	118	95·11	.....	11·60	396	13·13	17	·52	
	Dhobi Talao	38,684	1	1	709	517	1,226		406	428	834	558	145	33	736	65	392	2	379	95·71	15·38	19·08	749	19·36	36	·95	
	Fanaswadi	27,403			323	334	657		274	296	570	402	102	9	513	36	87	...	86	95·51	.....	18·72	483	17·63	21	·74	
	Bhuleshwar	36,459			263	274	537		257	273	530	334	142	...	476	36	7	2	5	96·36	100·00	13·11	474	13·00	13	·35	
	Khara Talao	22,979	1	1	1,946	784	2,730		195	256	451	302	55	1	358	71	2,279	...	2,279	94·21	.....	15·58	414	18·02	11	·44	
	Kumbharwada	27,703			308	335	643		302	335	637	493	48	1	542	61	6	...	6	94·10	.....	19·56	608	21·95	20	·67	
D	Khetwadi	31,937	1	...	358	343	701		323	315	638	496	93	3	592	35	63	10	50	98·17	76·92	18·85	626	19·60	16	·49	
	Girgaum	30,779			449	483	932		402	454	856	601	180	5	786	49	76	1	75	97·40	100.00	25·57	734	23·85	27	·90	
	Chaupati	11,397			249	183	432		160	157	317	226	64	8	298	10	115	4	106	97·07	44·44	26·50	272	23·86	5	·41	
	Walkeshwar	10,640	1	...	139	129	268		120	109	229	177	32	2	211	7	39	10	21	95·05	55·56	20·77	221	20·77	2	·17	
	Mahalakshmi	26,302			357	365	722		323	347	670	527	75	5	607	29	52	2	47	94·70	40·00	23·15	590	22·43	13	·50	
E	Mazagon	30,075	1	...	421	410	831		330	373	703	541	90	13	644	29	128	2	124	95·55	50·00	21·48	616	24·61	30	·98	
	Tarwadi	28,424			391	339	730		275	319	594	441	80	6	527	58	136	6	126	98·32	60·00	18·75	514	18·08	24	·87	
	2nd Nagpada	21,700																							9	·41	
	Kamathipura	36,751	1	1	819	808	1,627		790	800	1,590	1,218	193	4	1,415	112	37	2	32	95·74	40·00	16·44	1,422	16·49	28	·76	
	Tardeo	27,758																							18	·64	
	Byculla	75,348	1		783	853	1,636		668	806	1,474	1,114	157	4	1,275	118	162	6	155	94·03	85·71	15·67	1,267	15 50	91	1·20	
	1st Nagpada	6,414																							3	·57	
F	Parel	45,474	1		523	591	1,114		479	553	1,032	766	152	17	935	67	82	...	81	96·89	.....	20·56	942	20·72	38	·82	
	Sewri	19,067			248	299	547		238	289	527	385	70	1	456	52	20	...	20	96·00	.....	23·92	421	22·08	8	·44	
	Sion	30,680	1	1	482	484	966		462	476	938	710	136	4	850	65	28	...	28	97·37	.....	27·71	746	24·32	18	·58	
G	Mahim	30,492	1		811	788	1,599		753	785	1,538	1,120	228	27	1,375	122	61	1	59	97·10	50·00	45·13	1,304	42·77	15	·49	
	Worli	89,611			772	856	1,628		751	836	1,587	1,233	198	19	1,450	79	41	...	41	96·15	.....	16·18	1,392	15·53	70	·85	
	Harbour, Docks, Railways and Homeless	44,979	...	...	3,394	369	3,763		272	229	501	125	34	3	162	339	3,262	655	1,684	100·00	41·51	18·16	527	11·72	10	·25	
	Total ...	9,79,445	14	6	22,073	13,014	35,087	5,848	9,656	10,558	20,214	14,637	2,859	185	17,711	1,783	14,873	715	13,175	96·09	42·11	18·81	18,218	18·60	623	·63	1 11 3

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TABLE of Births registered and of Vaccinations of Infants under one year of age performed in the year 1914.

Ward.	SECTION.	Total number of births exclusive of still-born.	Still-born.	Deaths under one year.	Number of Infants surviving.	Number of Infants vaccinated under one year.	Percentage of vaccinations to births registered.
A	Upper Colaba	139	5	9	130	363	103·12
	Middle and Lower Colaba	213	33	123	90		
	Fort, South	23	4	10	13	444	82·22
	Fort, North	517	46	186	331		
	Esplanade	199	18	69	130	126	63·31
B	Mandvi	390	29	210	180	390	100·00
	Chukla	402	42	170	232	354	88·05
	Umarkhadi	1,135	92	479	656	751	66·16
	Dongri	433	39	214	219	532	122·86
	Market	302	20	145	157	293	97·01
C	Dhobi Talao	848	68	266	582	614	72·40
	Fanaswadi	611	34	175	436	446	72·99
	Bhuleshwar	588	50	249	339	372	63·26
	Khara Talao	469	45	219	250	379	80·81
	Kumbharwada	544	40	227	317	576	105·88
D	Khetwadi	683	50	196	487	538	78·77
	Girgaum	605	50	216	389	645	106·61
	Chowpati	236	24	61	175	237	100·42
	Walkeshwar	226	16	58	168	191	84·51
	Mahalakshmi	581	46	165	416	581	100·00
E	Mazagon	720	52	263	457	580	80·55
	Tarwadi	878	54	427	451	490	55·80
	2nd Nagpada	526	47	237	289		
	Kamathipura	800	82	372	428	1,360	67·66
	Tardeo	684	52	261	423		
	Byculla	1,861	162	736	1,125	1,273	62·58
	1st Nagpada	173	12	42	131		
F	Parel	819	78	333	486	843	102·93
	Sewri	429	25	173	256	432	100·69
	Sion	829	43	259	570	775	93·48
G	Mahim	900	58	270	630	1,228	136·44
	Worli	1,915	144	760	1,155	1,336	69·76
	Harbour, and Docks						
	Water Division and Out Station	1	1	.....	1	356	.....
	Railways and Homeless						
	Total ...	19,679	1,561	7,580	12,099	16,505	83·87

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TABLE of Primary Vaccinations performed with different kinds of Lymph in 1914.

	Number of operations.	Successful.	Unknown.	Percentage of success after deducting the unknown cases.
I Calf Lymph	4,727	4,284	367	98·26
II Glycerinated Lymph	15,487	13,427	1,416	95·42
III Lanolinated Lymph	.....	.....	.....	.....
IV Human Lymph	.....	.....	.....	.....
Total ...	20,214	17,711	1,783	96·09

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TABLE of prosecutions instituted by the Vaccination Department in 1914.

1	2	3	4	5	6	7
Section of the Act.	Nature of the Charge.	Number of Cases instituted.	Number of Cases discharged.	Otherwise.	Number of Cases convicted.	Amount of Fines inflicted.
Section VII of the Bombay Vaccination Act I of 1877.	.....	...	...	...	...	...

TABLE of DEATHS by Disease

Wards.	SECTION.	GENERAL DISEASES.																	
		Small-pox.	Measles.	Plague.	Scarlet Fever.	Fevers. Enteric Fever.	Fevers. Malarial Fever.	Fevers. Ague and Remittent Fever.	Relapsing Fever.	Influenza.	Whooping Cough.	Diphtheria.	Cholera.	Diarrhœa.	Dysentery.	Puerperal Septicæmia.	Leprosy.	Cancer.	Premature Birth.
A	Upper Colaba	...	...	4	...	...	1	3	...	...	...	...	...	7	5	1	...	1	2
	Middle and Lower Colaba...	11	...	96	...	1	11	46	...	...	...	...	1	14	15	2	...	3	8
	Fort, South	...	...	10	...	3	...	3	...	...	...	...	...	3	...	1	...	...	...
	Fort, North	3	4	89	...	19	16	66	...	...	1	...	5	45	14	17	...	6	10
	Esplanade	6	1	31	...	6	23	81	...	...	...	...	7	92	21	2	...	1	8
B	Mandvi	7	9	131	...	6	6	70	...	...	...	...	4	51	13	14	...	2	2
	Chukla	1	4	60	...	2	7	39	...	...	...	...	2	27	16	12	...	1	2
	Umarkhadi	2	19	132	...	5	8	128	...	...	...	...	13	100	54	24	...	10	4
	Dongri	5	11	57	...	...	4	90	...	...	...	...	6	35	34	4	1	1	3
C	Market	6	4	69	...	6	9	40	...	...	1	...	7	27	16	7	...	1	3
	Dhobi Talao	19	14	138	...	12	14	56	...	2	2	...	8	66	21	8	...	4	13
	Fanaswadi	8	18	65	...	6	3	47	...	...	...	...	4	36	17	10	...	3	10
	Bhuleshwar	...	2	96	...	2	10	46	...	...	2	...	1	106	29	10	1	...	5
	Khara Talao	2	11	64	...	...	3	42	...	...	...	...	3	51	24	20	1	4	2
	Kumbharwada	2	11	87	...	3	3	68	...	...	...	...	3	62	15	7	...	...	4
D	Khetwadi	11	5	42	...	8	10	47	...	...	2	...	3	28	23	1	3	3	17
	Girgaum	18	12	27	...	6	2	57	...	1	...	...	2	17	20	6	1	3	26
	Chowpati	4	...	18	...	1	3	16	...	...	...	...	5	12	10	3	...	1	3
	Walkeshwar	1	2	27	...	1	2	9	...	...	...	1	1	3	9	2	...	1	8
	Mahalakshmi	4	10	107	...	5	5	47	...	...	1	...	2	68	13	6	...	...	9
E	Mazagon	11	5	154	...	8	7	209	...	...	...	...	16	83	74	1	...	1	7
	Tarwadi	9	10	107	...	7	9	200	...	...	...	...	7	139	67	6	...	5	6
	2nd Nagpada...	3	7	44	...	...	3	57	...	...	...	...	1	62	12	15	1	1	1
	Kamathipura	8	15	95	...	...	1	139	...	...	...	...	4	106	30	20	...	...	2
	Tardeo	2	11	63	...	3	10	61	...	...	...	1	5	97	19	12	...	1	5
	Byculla	21	6	275	...	6	15	162	...	...	...	...	29	250	107	35	1	5	12
	1st Nagpada	1	2	13	...	2	...	15	...	...	...	...	...	13	4	1	...	...	1
F	Parel	12	9	160	...	3	6	195	...	...	...	...	14	105	26	8	1	1	7
	Sewri	8	2	131	...	...	...	89	...	...	...	...	7	54	22	5	...	...	2
	Sion	7	9	136	...	7	5	82	...	...	...	...	24	83	43	7	52	5	...
G	Mahim	5	15	134	...	2	4	55	...	...	1	...	11	111	50	10	1	1	2
	Worli	41	35	277	...	6	5	236	...	...	...	...	15	215	62	14	5	2	3
	Harbour, Docks, Railways and Homeless	14	...	2	...	11	8	16	...	...	...	...	11	13	16	...	...	1	...
	TOTAL ...	252	263	2,941	...	147	213	2,517	...	3	10	2	221	2,201	901	291	68	68	187

and Section in 1914.

					LOCAL DISEASES.											INJURIES.					
								Respiratory System.								General.					
Debility.	Old Age.	Tubercle of Lungs.	All other Tubercular Diseases.	Other General Diseases.	Nervous System.	Diseases of the Eye, Ear and Nose.	Circulatory System.	Phthisis.	Other Diseases of the Respiratory System.	Digestive System.	Lymphatic System.	Urinary System.	Generative System.	Still-born.	Organs of Locomotion and Connective Tissue.	Other Local Diseases.	Drowning.	Other General Injuries.	Local Injuries.	Poison.	Unspecified Causes.	TOTAL.
2	...	2	...	5	1	1	2	4	20	3	...	...	1	5	...	...	1	2	1	...	...	69
19	8	2	3	31	38	...	19	10	147	20	...	6	...	33	...	1	1	6	1	3	2	525
2	...	1	1	3	4	...	3	...	13	5	...	...	...	4	...	...	...	...	1	2	...	55
45	31	6	12	55	51	...	14	36	262	39	...	13	9	46	4	1	1	6	8	5	...	893
21	11	31	13	26	23	1	8	12	119	18	...	15	4	18	5	2	2	25	6	...	1	622
54	46	2	11	76	48	...	12	61	348	41	...	10	8	29	2	...	...	7	2	1	...	1,045
41	64	11	16	73	39	...	6	75	275	54	...	6	3	42	1	...	1	6	4	1	...	849
148	181	8	28	154	157	...	16	126	585	71	...	23	8	92	1	1	3	12	4	1	3	2,029
64	46	7	11	43	35	...	3	25	281	36	...	5	...	39	1	...	...	12	5	1	...	826
34	29	2	8	35	33	...	17	23	208	30	...	8	4	20	2	...	3	9	2	3	...	648
49	49	16	12	82	75	...	16	30	368	81	...	27	21	68	1	2	4	10	4	6	3	1,283
39	25	2	8	51	58	...	11	20	208	58	...	9	6	34	...	...	1	2	6	3	...	734
47	80	9	11	146	77	...	19	23	369	74	...	10	11	50	1	...	2	16	2	2	...	1,209
63	67	7	11	85	101	...	6	56	228	35	...	7	3	45	1	1	2	13	3	2	1	913
58	65	4	11	79	103	...	4	71	265	37	...	4	7	40	1	...	...	3	4	1	2	984
39	55	7	19	78	63	...	19	76	228	61	1	14	7	50	1	1	3	15	8	1	...	899
46	45	4	17	70	66	...	9	54	238	62	1	15	6	50	3	1	1	8	2	1	2	849
13	18	5	3	32	28	...	5	18	63	17	...	6	1	24	...	...	3	4	2	3	...	295
7	9	...	7	11	21	...	8	12	69	32	1	3	3	16	1	1	3	5	4	...	...	264
51	34	2	5	49	40	...	5	36	136	17	...	13	2	46	1	1	1	4	3	4	2	683
69	63	1	6	43	48	...	5	14	310	17	...	8	7	52	1	1	2	10	6	1	3	1,191
138	53	16	43	65	64	...	13	26	326	45	...	12	10	54	7	3	7	42	13	3	4	1,462
68	103	...	7	137	101	...	8	60	253	23	...	11	3	47	1	1	...	6	3	2	...	994
139	107	11	19	108	121	...	2	167	351	47	...	7	1	82	2	1	1	9	10	...	...	1,523
64	40	2	13	105	86	...	8	82	245	45	1	10	3	52	1	...	1	3	1	5	1	1,006
242	221	5	38	278	138	1	13	36	866	50	...	9	3	162	10	...	6	14	13	2	2	2,871
10	10	3	9	11	12	...	5	8	58	7	...	8	...	12	1	...	...	3	1	2	...	200
143	30	5	5	77	51	...	6	33	367	25	...	13	3	78	1	...	4	4	4	1	3	1,322
72	32	1	2	32	26	...	2	7	137	17	...	1	1	25	...	...	2	5	2	1	...	670
138	20	...	3	64	39	1	9	23	207	32	...	10	2	43	4	1	6	16	3	2	...	1,040
73	63	9	9	32	70	...	8	26	325	35	1	26	1	58	4	...	4	12	2	1	2	1,105
262	172	2	7	141	117	...	13	81	841	46	1	12	9	144	12	2	7	13	14	2	2	2,672
1	5	5	1	1	1	...	4	3	18	3	...	1	...	1	1	...	5	11	11	...	6	169
2,261	1,772	186	369	2,278	1,935	4	298	1,334	8,734	1,183	6	322	147	1,561	71	21	77	313	156	62	39	31,853

TABLE of DEATHS by Race, Cause and Sex in 1914.

RACE OR CASTE.	GENERAL DISEASES.																			
	Small-pox.		Measles.		Plague.		FEVERS.										Influenza.		Whooping Cough.	
							Scarlet Fever.		Enteric Fever.		Malarial Fever.		Ague and Remittent Fever.		Relapsing Fever.					
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Jains	2	...	3	2	156	22	...	...	10	2	4	2	41	31	...	...	...	...	2	1
Brahmins	1	3	7	10	89	30	...	...	4	3	8	2	62	30	...	...	...	...	...	...
Lingaits	...	...	...	2	6	7	...	...	...	...	...	1	12	4	...	...	...	...	...	...
Bhatias	...	...	...	1	5	3	...	...	2	1	2	2	10	7	...	...	...	...	...	...
Hindus of other Castes	80	66	61	54	1,228	548	...	...	20	6	64	22	907	467	...	...	...	...	...	1
Hindus, Low Caste	10	12	35	36	201	144	...	...	...	...	6	1	168	124	...	...	...	...	...	...
Mussulmans	22	9	17	16	256	75	...	...	5	3	27	13	290	189	...	...	...	...	...	1
Parsees	2	...	4	1	32	25	...	...	15	14	13	14	31	20	...	...	1	2	1	4
Jews	...	...	...	1	2	2	...	...	1	1	...	...	4	11	...	...	...	...	...	...
Native Christians	27	15	4	7	68	34	...	...	18	7	15	5	49	51	...	...	...	...	...	...
Eurasians	...	...	1	...	3	1	...	...	3	4	...	2	1	3	...	...	...	...	...	...
Europeans	3	...	...	1	1	1	...	...	22	5	6	4	1	...	...	...	...	...	...	...
Negro-Africans	...	...	...	...	...	2	...	...	...	...	...	...	2	1	...	...	...	...	...	...
Buddhists	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
Other and Unknown Castes ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All Castes ... Males	147	...	132	...	2,047	...	...	...	101	...	145	...	1,579	...	...	...	1	...	3	...
All Castes ... Females	...	105	...	131	...	894	...	...	...	46	...	68	...	938	...	...	...	2	...	7
All Castes ... Persons	252		263		2,941		...		147		213		2,517		...		3		10	

26—*continued.*

TABLE of DEATHS by Race, Cause and Sex in 1914—*continued.*

RACE OR CASTE.	GENERAL DISEASES—*contd.*																			
	Diphtheria.		Cholera.		Diarrhœa.		Dysentery.		Puerperal Septicæmia.		Leprosy.		Cancer.		Premature Birth.		Debility.		Old Age.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Jains	...	...	1	4	26	29	12	16	...	11	1	...	2	1	...	1	26	25	27	20
Brahmins	...	...	7	1	38	32	28	14	...	7	1	1	2	...	14	3	21	25	30	27
Lingaits	...	...	...	...	5	6	4	...	...	2	...	...	..	...	...	...	4	5	3	9
Bhatias	...	...	...	...	4	6	3	3	...	10	...	...	...	...	...	...	3	7	5	10
Hindus of other Castes	1	...	86	54	512	458	241	161	...	103	39	8	7	5	38	27	655	517	320	444
Hindus, Low Caste	...	...	6	8	189	170	57	48	...	28	5	1	2	1	10	7	189	153	71	91
Mussulmans	...	...	15	5	289	223	145	70	...	119	4	1	9	6	9	7	261	204	298	294
Parsees	...	1	4	3	43	32	13	15	...	2	1	...	5	9	13	13	13	16	26	48
Jews	...	...	1	1	8	11	4	1	...	5	...	...	...	...	2	1	4	6	9	9
Native Christians	...	...	10	13	42	59	15	24	...	4	4	2	1	9	12	18	60	59	10	16
Eurasians	...	...	...	1	5	5	3	1	...	...	...	...	1	1	...	1	1	1	...	1
Europeans	...	...	2	...	6	1	14	9	...	...	...	...	1	6	6	5	2	1	...	...
Negro-Africans	...	...	...	...	1	...	...	...	...	...	...	...	..	...	...	...	...	...	3	...
Buddhists	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...
Other and Unknown Castes ...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...
All Castes... Males	1	...	132	...	1,169	...	539	...	...	...	55	...	30	...	104	...	1,241	...	803	...
All Castes... Females	...	1	...	89	...	1,032	...	362	...	291	...	13	...	38	...	83	...	1,020	...	969
All Castes... Persons	2		221		2,201		901		291		68		68		187		2,261		1,772	

26—*continued.*

TABLE of DEATHS by Race, Cause and Sex in 1914—*continued.*

RACE OR CASTE.	GENERAL DISEASES—*concluded.*						LOCAL DISEASES.															
	Tubercle of Lungs.		Other Tubercular Diseases.		Other General Diseases.		Nervous System		Diseases of the Eye, Ear and Nose.		Circulatory System.		Respiratory System. Phthisis.		Respiratory System. Other Diseases of the Respiratory System.		Digestive System.		Lymphatic System.		Urinary System.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Jains	...	3	2	6	33	47	44	35	...	...	11	5	14	18	258	139	33	29	...	...	9	8
Brahmins...	3	3	11	9	38	43	53	31	...	...	9	1	14	22	188	118	36	24	...	...	10	6
Lingaits	...	...	...	...	7	5	7	4	...	...	...	...	...	8	14	18	2	1	...	...	...	...
Bhatias	...	1	1	..	8	11	10	8	...	...	2	...	3	7	42	33	6	5	...	...	2	1
Hindus of other Castes	61	17	95	49	443	458	392	330	...	...	73	17	285	283	2,336	1,770	293	168	1	1	58	42
Hindus, Low Caste	4	4	4	3	111	131	132	113	1	..	8	4	78	78	645	639	48	36	1	...	8	9
Mussulmans	42	13	56	52	285	455	318	214	...	...	51	16	173	262	1,123	811	172	92	...	...	45	35
Parsees	2	2	10	14	58	41	61	38	...	...	28	20	8	10	107	97	72	44	1	2	16	21
Jews	...	...	2	2	4	14	4	7	...	...	1	2	4	2	19	13	8	5	...	...	4	3
Native Christians	14	10	24	21	30	34	58	51	1	...	14	13	24	35	173	124	33	31	...	...	20	13
Eurasians	2	1	...	1	3	5	4	3	...	...	5	3	1	1	13	10	7	9	...	...	3	4
Europeans	3	1	4	3	4	6	5	7	1	...	12	3	1	...	18	7	17	9	...	...	3	2
Negro-Africans	...	...	...	...	...	2	2	1	...	...	...	...	1	1	5	4	...	...	...	...	...	...
Buddhists...	...	...	...	...	1	...	...	...	1	...	...	...	...	1	1	...	3	...	...	...	...	...
Other and Unknown Castes ...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	3	6	...	...	...	...	...	...
All Castes ... Males	131	...	209	...	1,025	...	1,091	...	4	...	214	...	606	...	4,945	...	730	...	3	...	178	...
All Castes ... Females ...	...	55	...	160	...	1,253	...	844	...	...	..	84	...	728	...	3,789	...	453	...	3	...	144
All Castes ... Persons... ...	186		369		2,278		1,935		4		298		1,334		8,734		1,183		6		322	

TABLE of DEATHS by Race, Cause and Sex in 1914—*concluded.*

RACE OR CASTE	LOCAL DISEASES—*concld.*								INJURIES.												
	Generative System.		Still-born.		Organs of Locomotion and Connective Tissue.		Other Local Diseases.		GENERAL. Drowning.		GENERAL. Other General Injuries.		Local Injuries.		Poisons.		Unspecified Causes.		All Causes.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
Jains	5	6	22	15	1	...	1	...	1	...	11	10	...	1	4	...	...	...	740	474	1,214
Brahmins	1	7	28	15	2	2	1	...	...	1	7	1	2	...	3	1	...	...	690	457	1,147
Lingaits	...	...	3	1	...	...	...	...	...	...	1	1	...	1	...	...	...	...	65	74	139
Bhatias	1	3	11	4	1	...	...	...	...	...	...	2	1	...	2	...	...	...	113	121	234
Hindus of other Castes ...	6	51	383	299	22	6	5	2	29	14	101	43	67	19	21	7	12	7	8,559	6,225	14,784
Hindus, Low Caste ...	1	5	147	98	7	2	1	1	7	4	24	3	11	2	3	6	1	...	2,044	1,864	3,908
Mussulmans	8	25	203	123	6	8	4	1	11	3	48	28	24	6	4	2	9	2	4,026	3,260	7,286
Parsees	4	11	36	36	2	2	...	3	2	2	3	7	5	4	3	1	...	...	599	538	1,137
Jews	...	1	6	3	...	...	...	...	...	1	1	1	...	...	...	...	1	...	83	100	183
Native Christians ...	4	6	38	58	5	4	1	...	...	...	5	4	4	...	1	...	1	...	747	668	1,415
Eurasians	...	1	5	2	...	1	...	1	...	...	...	...	...	...	...	...	...	...	56	63	119
Europeans	...	1	7	5	...	...	...	...	1	...	2	...	7	...	4	...	...	...	146	72	218
Negro-Africans	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	11	25
Buddhists	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	1	11
Other & Unknown Castes.	...	...	19	13	...	...	...	...	1	...	5	5	1	1	...	...	5	1	18	15	33
All Castes... Males ...	30	...	908	...	46	...	13	...	52	...	208	...	122	...	45	...	29	...	17,910	...	
All Castes... Females ...	...	117	...	653	...	25	...	8	...	25	...	105	...	34	...	17	...	10	...	13,943	
All Castes... Persons ...	147		1,561		71		21		77		313		156		62		39		31,853		

TABLE of DEATHS by Age, Sex and Cause in 1914.

AGE.		GENERAL DISEASES.																			
		Small-pox.		Measles.		Plague.		FEVERS. Scarlet Fever.		Enteric Fever.		Malarial Fever.		Ague and Remittent Fever.		Relapsing Fever.		Influenza.		Whooping Cough.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
DAYS ...	1 to 30	1	...	...	...	...	...	...	...	...	...	...	...	16	7	...	...	...	...	...	...
MONTHS ...	1 to 6	15	21	10	8	...	...	...	...	...	1	3	...	29	27	...	...	...	...	1	...
	7 to 12	7	16	30	34	...	1	...	...	1	...	3	4	34	38	...	...	...	...	1	4
YEARS ...	1 to 2	5	4	43	32	1	2	...	...	2	...	4	2	46	41	...	...	...	...	...	1
	2 to 3	5	7	14	19	7	9	...	...	...	...	...	2	13	12	...	...	...	...	1	1
	3 to 4	5	3	9	11	9	6	...	...	...	3	...	1	18	18	...	...	...	...	...	...
	4 to 5	2	2	10	9	10	6	...	...	1	2	2	1	29	27	...	...	...	...	...	...
	5 to 10	8	11	15	17	130	127	...	...	6	5	3	6	92	100	...	...	...	...	...	...
	10 to 15	9	6	1	1	202	122	...	...	7	3	5	6	109	63	...	...	...	...	...	1
	15 to 20	25	9	...	...	432	160	...	...	13	6	13	8	203	130	...	...	1	...	...	...
	20 to 25	31	10	...	...	416	152	...	...	26	13	21	9	248	145	...	...	...	...	...	...
	25 to 30	10	11	...	...	319	103	...	...	17	4	22	10	228	105	...	...	...	...	...	...
	30 to 35	8	2	...	...	185	56	...	...	8	...	16	9	151	72	...	...	...	...	...	...
	35 to 40	3	1	...	...	144	53	...	...	9	2	14	1	120	46	...	...	...	...	...	...
	40 to 45	4	1	...	...	75	27	...	...	3	...	11	1	68	38	...	...	...	...	...	...
	45 to 50	1	...	...	...	53	32	...	...	2	4	6	...	61	29	...	...	...	...	...	...
	50 to 55	1	...	...	...	24	10	...	...	...	...	7	2	26	9	...	...	...	...	...	...
	55 to 60	6	...	...	...	25	18	...	...	2	...	5	1	53	13	...	...	...	...	...	...
	60 & over	1	1	...	...	15	10	...	...	4	3	10	5	35	18	...	...	...	2	...	...
	Unspecified Age	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ALL AGES.	Males	147	...	132	...	2,047	...	...	...	101	...	145	...	1,579	...	...	...	1	...	3	...
	Females	...	105	...	131	...	894	...	...	...	46	...	68	...	938	...	...	...	2	...	7
	Persons	252		263		2,941		...		147		213		2,517		...		3		10	

27—*continued.*

TABLE of DEATHS by Age, Sex and Cause in 1914—*continued.*

AGE.		GENERAL DISEASES—*contd.*																			
		Diphtheria.		Cholera.		Diarrhœa.		Dysentery.		Puerperal Septicæmia.		Leprosy.		Cancer.		Premature Birth.		Debility.		Old Age.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
DAYS	1 to 30	...	...	...	...	15	15	...	...	...	...	...	...	...	...	103	81	1,068	846	...	...
MONTHS	1 to 6	...	...	...	...	73	70	8	7	...	...	...	...	...	...	1	2	109	123	...	...
	7 to 12	...	...	...	...	178	176	17	20	...	...	...	...	...	...	...	...	21	20	...	...
YEARS	1 to 2	...	...	1	1	158	145	35	32	...	...	...	...	...	...	...	...	13	4	...	...
	2 to 3	...	1	...	1	58	74	30	45	...	...	...	...	...	...	...	...	4	3	...	...
	3 to 4	...	...	...	1	22	27	28	18	...	...	...	...	...	...	...	...	2	1	...	...
	4 to 5	...	...	1	...	19	16	25	18	...	...	...	...	...	...	...	...	...	1	...	...
	5 to 10	1	...	8	6	33	42	24	33	...	...	...	...	...	...	...	...	1	1	...	...
	10 to 15	...	...	7	6	16	25	16	13	...	5	2	1	...	...	...	...	1	1	...	...
	15 to 20	...	...	21	14	42	45	41	27	...	89	4	2	...	...	...	...	1	2	...	...
	20 to 25	...	...	18	15	63	68	47	33	...	107	5	1	...	2	...	...	1	1	...	...
	25 to 30	...	...	21	16	63	51	71	23	...	57	9	2	3	...	...	...	1	2	...	...
	30 to 35	...	...	18	6	70	46	42	24	...	25	10	1	3	3	...	...	3	1	...	...
	35 to 40	...	...	14	6	77	47	44	12	...	6	8	...	4	3	...	...	4	3	...	...
	40 to 45	...	...	7	3	41	22	39	10	...	2	3	1	1	7	...	...	2	...	...	...
	45 to 50	...	...	6	7	55	35	28	17	...	...	7	1	...	5	...	...	10	11	...	...
	50 to 55	...	...	5	2	16	11	11	2	...	...	5	2	3	5	...	...	...	...	17	9
	55 to 60	...	...	2	4	85	47	17	11	...	...	1	1	4	1	...	...	...	...	90	112
	60 and over	...	...	3	1	85	70	16	17	...	...	1	1	12	12	...	...	...	...	696	848
	Unspecified Age	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ALL AGES.	Males	1	...	132	...	1,169	...	539	...	...	...	55	...	30	...	104	...	1,241	...	803	...
	Females	...	1	...	89	...	1,032	...	362	...	291	...	13	...	38	...	83	...	1,020	...	969
	Persons	2		221		2,201		901		291		68		68		187		2,261		1,772	

27—*continued.*

TABLE of DEATHS by Age, Sex and Cause in 1914—*continued.*

AGE.	GENERAL DISEASES—*concld.*						LOCAL DISEASES.															
	Tubercle of Lung.		Other Tubercular Diseases.		Other General Diseases.		Nervous System.		Diseases of the Eye, Ear and Nose.		Circulatory System.		Respiratory System. Phthisis.		Respiratory System. Other Diseases of the Respiratory System.		Digestive System.		Lymphatic System.		Urinary System.	
	Males.	Females.	Males.	Females	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
DAYS ... 1 to 30	...	...	...	...	8	11	162	132	...	...	...	3	...	...	36	31	13	11	...	...	...	...
MONTHS ... 1 to 6	...	...	3	1	37	37	570	313	...	...	...	...	1	1	530	510	23	17	...	...	1	2
MONTHS ... 7 to 12	...	...	1	1	108	120	162	132	...	...	...	...	...	...	645	673	90	90	...	...	...	2
YEARS ... 1 to 2	...	1	4	3	171	175	66	54	...	...	...	1	...	...	395	431	74	77	...	...	...	...
2 to 3	...	...	...	6	113	109	21	13	...	...	1	...	...	...	142	164	17	8	...	...	2	...
3 to 4	...	..	...	...	54	67	10	5	...	...	...	...	...	1	58	64	5	5	...	...	1	...
4 to 5	...	...	4	1	24	23	9	1	...	...	...	...	...	2	47	63	3	3	...	...	1	1
5 to 10	1	1	10	8	52	63	14	15	1	...	1	3	6	17	107	165	12	9	...	...	3	4
10 to 15	3	3	8	12	22	64	8	8	1	...	...	...	16	62	82	64	17	8	...	...	5	1
15 to 20	10	10	22	38	57	130	14	27	...	...	7	4	95	167	254	132	42	20	...	...	5	14
20 to 25	29	9	24	30	88	156	26	17	1	...	23	9	105	160	336	123	57	36	...	...	8	9
25 to 30	32	11	42	22	75	115	28	19	1	...	21	12	132	137	320	135	82	38	1	...	20	24
30 to 35	21	7	31	15	48	55	22	10	...	...	29	7	92	81	270	104	65	35	...	...	22	11
35 to 40	10	5	23	8	35	44	24	11	...	...	23	5	77	61	286	132	57	23	1	...	15	13
40 to 45	7	3	16	9	36	23	26	11	...	...	31	7	41	18	249	104	46	16	...	1	18	12
45 to 50	8	1	9	6	36	25	31	10	...	...	20	7	25	15	345	252	38	18	1	...	19	10
50 to 55	2	...	4	...	23	11	21	13	...	...	15	5	4	2	180	89	19	3	...	1	17	12
55 to 60	5	3	6	...	21	12	37	13	...	...	19	5	8	3	363	279	22	14	...	...	19	16
60 and over	3	1	2	...	17	13	46	40	...	...	24	16	4	1	300	274	43	22	...	1	22	13
Unspecified Age	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ALL AGES. Males	131	...	209	...	1,025	...	1,091	...	4	...	214	...	606	...	4,945	...	730	...	3	...	178	...
ALL AGES. Females	...	55	...	160	...	1,253	...	844	...	...	...	84	...	728	...	3,789	...	453	...	3	...	144
ALL AGES. Persons	186		369		2,278		1,935		4		298		1,334		8,734		1,183		6		322	

27—*concluded.*

TABLE of DEATHS by Age, Sex and Cause in 1914—*concluded.*

AGE.	LOCAL DISEASES—*concluded.*								INJURIES.													
	Generative System.		Still-born.		Organs of Locomotion and Connective Tissue.		Other Local Diseases.		General. Drowning.		General. Other General Injuries.		Local Injuries.		Poisons.		Unspecified Causes.		All Causes.		All Ages.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
DAYS ... 1 to 30 ...	1	..	...	...	...	1	1	...	1	...	6	7	1	1	1	...	1	3	1,439	1,149	2,583
MONTHS 1 to 6...	...	...	...	...	...	2	...	1	...	...	1	2	...	...	...	...	...	...	1,215	1,145	2,360
MONTHS 7 to 12...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	1	...	...	1,298	1,334	2,632
YEARS... 1 to 2...	...	...	...	...	...	1	...	1	...	1	4	1	1	...	...	...	...	...	1,023	1,010	2,033
2 to 3...	...	...	...	...	...	1	...	...	2	...	1	1	...	...	3	...	...	...	434	476	910
3 to 4...	...	...	...	...	...	...	...	...	1	...	4	5	2	...	...	...	...	...	228	236	464
4 to 5...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	...	1	...	190	178	368
5 to 10...	...	...	...	...	2	1	...	1	4	2	6	8	5	7	...	1	...	...	545	653	1,198
10 to 15...	...	1	...	...	1	...	...	...	5	2	6	6	4	1	...	2	...	...	553	487	1,040
15 to 20...	1	23	...	...	3	2	...	1	3	5	17	10	8	5	4	2	1	...	1,339	1,082	2,421
20 to 25...	1	31	...	...	9	2	2	...	6	4	31	10	23	5	12	5	2	1	1,653	1,163	2,816
25 to 30...	5	28	...	...	9	...	2	...	11	1	26	7	26	4	5	2	7	3	1,609	942	2,551
30 to 35...	1	18	...	...	6	2	1	1	7	4	27	8	14	1	6	2	3	...	1,179	606	1,785
35 to 40...	4	9	...	...	4	2	1	1	4	...	24	6	11	2	1	1	3	...	1,044	503	1,547
40 to 45...	3	4	...	...	2	1	1	...	2	2	6	2	9	...	5	...	1	...	753	325	1,078
45 to 50...	4	1	...	...	1	4	2	...	1	...	16	6	5	2	4	...	2	...	796	498	1,294
50 to 55...	1	...	...	...	2	2	1	1	2	1	7	3	7	2	2	...	...	...	422	197	619
55 to 60...	6	1	...	...	4	1	...	1	3	1	11	12	3	1	1	1	3	...	821	571	1,392
60 & over.	3	1	...	...	3	1	2	...	...	2	12	9	3	2	...	...	2	2	1,364	1,386	2,750
Unspecified Age.	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	3	1	5	2	7
ALL AGES. Males ...	30	...	907	...	46	...	13	...	52	...	208	...	122	...	45	...	29	...	17,910	...	
ALL AGES. Females.	...	117	..	654	..	25	...	8	...	25	...	105	...	34	...	17	...	10	...	19,943	
ALL AGES. Persons...	147		1,561		71		21		77		313		156		62		39		31,853		31,853

TABLE of DEATHS by DISEASE and

Title of Orders.	Occupation or Trade of Family.	GENERAL DISEASES.															
					FEVER.												
		Small-pox.	Measles.	Plague.	Scarlet Fever.	Enteric Fever.	Malarial Fever.	Ague and Remittent Fever.	Relapsing Fever.	Influenza.	Whooping Cough.	Diphtheria.	Cholera.	Diarrhœa.	Dysentery.	Puerperal Septicæmia.	Leprosy.
Professional General Government ..	1 (a) Imperial Government Officials, Clerks, &c.	..	..	5	..	1	..	2	..	..	..	..	1	..	4	..	..
	2 (b) Foreign Government Consuls, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	3 (c) Native States, Chiefs, Staffs, Retinue, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	4 (d) Mul. and Local Government Police, &c.	..	..	...	..	1	..	..	..	..	..	..	..	..	..	..	..
	Post and Telegraph Office, Peons, &c.	..	..	21	..	1	4	9	..	..	..	..	2	11	2	1	..
Defence	5 (a) Army	..	..	1	..	..	3	..	..	...	..	..	..	..	3	..	..
	6 (b) Navy	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..
Learned Professions.	7 (a) Ministers of Religions, Professors, &c.	1	..	13	..	2	3	10	..	..	..	..	...	12	2	..	..
	8 (b) Law, Medical Literature (Science), &c.	..	..	..	..	1	1	..	..	...	..	..	..	..	1	..	..
	9 (c) Unlicensed Practitioners, Dentists, Opticians, Nurses, &c. ..	1	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..
Commercial ..	10 (a) General Merchants in Special Goods	..	..	51	..	5	3	22	..	..	..	..	3	18	11	..	..
	11 (b) Bankers, Accountants, Clerks, Capitalists, Shroffs, &c. ..	..	..	46	...	13	6	27	..	..	..	..	2	9	10	..	..
	12 (c) Shopkeepers, other General Dealers, Hawkers, &c. ..	1	..	126	..	6	6	74	..	..	..	..	1	49	23	5	1
	13 (d) Intoxicating Drinks and Drugs Dealers	..	..	6	..	1	..	1	...	..	..	..	..	3	3	..	..
	14 (e) Vegetable Food Dealers ..	..	..	4	..	..	..	4	..	..	..	..	..	..	1	..	..
	15 (f) Vegetable Substance Makers and Dealers	..	..	5	..	..	..	5	..	..	..	..	..	1	3	..	..
	16 (g) Animal Food Dealers, Fishers, &c.	1	..	22	..	..	..	9	..	..	..	..	3	11	3	2	1
	17 (h) Animal Substance Makers and Dealers	1	..	25	..	1	..	8	..	..	..	..	..	2	1	..	..
	18 (i) Entertainers, Hotel, Club, Refreshment House Keepers ..	1	..	10	..	1	1	6	..	..	..	..	1	4	2	..	..
	19 (j) Carriers on Road, Horse, Carriage, Cart Keepers	1	..	104	..	..	3	65	..	..	..	..	..	27	14	1	1
	20 (k) Carriers on Seas, Boatmen, Seamen, &c.	4	..	11	..	7	5	26	..	..	..	..	13	3	8	..	..
Railway ..	21 (a) Officials, Clerks, &c.	1	..	3	..	2	..	4	..	..	..	..	2	3	..	..	..
	22 (b) Workshop Servants, &c. ..	1	..	9	..	2	2	5	..	..	..	..	..	2	1	..	..
	23 (c) Labourers, Earth-workers, &c..	..	..	10	..	..	..	9	..	..	..	..	1	..	2	..	..
Port and Improvement Trusts and Harbour.	24 (a) Officials, Clerks, &c.	..	..	4	..	3	1	1	..	..	..	..	..	..	1	..	..
	25 (b) General Labourers, &c. ..	..	..	7	..	1	1	12	..	..	..	..	..	5	4	..	..
Tramway ..	26 (a) Officials, Clerks, &c.	..	..	1	...	..	..	..	..	..	..	..	..	..	1	..	..
	27 (b) General Labourers	..	..	..	..	..	..	5	..	..	..	..	..	..	1	..	..
Industrial ..	28 (a) Metal, &c., Workshop-keepers, Mechanical Tools Makers ..	..	..	1	..	..	..	2	..	..	..	..	2	..	3	..	..
	29 (b) Metal, &c., Workshop Servants, Labourers, &c.	1	..	41	..	10	1	36	..	..	..	..	2	12	6	1	..
	30 (a) Mills (Cotton, Silk, &c.), Masters, Managers, Clerks, &c. ..	..	..	1	..	1	..	5	..	..	..	..	1	3	..	..	..
	31 (b) Weavers, Spinners and other Workers	24	..	451	..	2	7	390	..	..	..	.	31	92	58	11	3
	32 (a) Presses (Printing, &c.), Printers, &c.	..	..	18	..	2	2	7	..	..	..	..	2	6	1	1	1
	33 (b) Other General Labourers ..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..

OCCUPATION in 1914.

							LOCAL DISEASES.												INJURIES.					
										RESPIRATORY SYSTEM.									GENERAL.					
Cancer.	Premature Birth.	Debility.	Old Age.	Tubercle of Lungs.	Other Tubercular Diseases.	Other General Diseases.	Nervous System.	Diseases of the Eye, Ear and Nose.	Circulatory System.	Phthisis.	Other Diseases of the Respiratory System.	Digestive System.	Lymphatic System.	Urinary System.	Generative System.	Still-born.	Organs of Locomotion and Connective Tissue.	Other Local Diseases.	Drowning.	Other General Injuries.	Local Injuries.	Poison.	Unspecified Causes.	TOTAL.
1	..	..	...	1	1	3	6	..	2	1	13	3	..	1	..	..	..	..	..	..	..	3	..	48
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
..	..	..	..	..	..	..	..	..	..	...	..	..	..	..	...	..	..	..	..	..	...	..	..	
..	..	..	..	..	..	..	..	..	1	..	..	..	..	...	..	..	..	..	..	..	..	1	..	3
..	..	..	4	..	7	3	7	..	6	7	46	6	..	..	..	..	..	..	..	3	4	2	..	146
..	..	..	...	..	...	..	1	..	..	1	3	2	..	..	..	..	..	..	..	4	4	..	..	22
..	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	4
2	..	1	14	3	...	6	5	..	7	5	24	13	..	5	..	...	1	1	..	2	..	..	..	132
..	..	..	..	..	1	4	2	..	2	...	2	3	..	..	..	..	..	..	..	1	..	2	..	20
..	..	..	2	..	..	2	2	..	2	2	9	1	...	1	..	..	..	..	..	..	...	..	..	25
1	..	..	26	5	4	16	15	..	11	17	98	17	..	11	2	..	1	1	3	2	3	..	..	346
2	..	1	17	1	10	27	19	..	14	6	90	22	..	8	3	..	2	..	2	5	4	6	..	352
3	..	1	70	5	9	38	20	..	22	46	216	52	1	11	2	..	1	2	2	7	6	4	..	810
..	..	..	2	..	..	3	3	..	4	1	11	1	1	1	..	..	..	..	1	1	..	..	..	43
..	..	..	3	..	..	1	1	..	..	1	8	1	..	..	..	..	..	..	..	..	1	..	..	25
..	..	..	5	..	..	..	..	..	..	2	9	2	..	..	..	..	..	..	..	..	..	..	..	32
..	..	..	17	..	1	3	9	..	4	5	40	4	..	2	..	..	..	..	..	1	..	..	1	139
..	..	1	15	..	3	1	2	..	1	12	35	7	..	..	..	..	..	..	..	1	..	..	..	116
..	..	..	6	..	2	4	..	..	1	4	16	1	..	2	..	..	..	..	1	1	..	2	..	66
..	..	2	32	2	7	16	7	..	6	35	149	17	..	5	..	..	1	..	2	7	10	3	..	521
2	..	...	9	2	2	4	2	1	4	7	41	9	..	5	1	..	..	..	2	6	6	..	2	182
..	..	..	1	..	1	3	2	..	2	1	5	3	..	1	..	..	..	..	..	..	..	..	..	34
..	..	..	1	1	...	3	..	..	3	1	20	1	..	3	..	..	..	1	..	3	2	..	..	61
..	..	..	1	1	..	1	..	..	2	2	13	1	..	..	..	..	..	..	..	3	5	..	1	52
..	..	..	...	..	..	1	1	..	..	..	4	3	..	...	..	..	..	..	..	..	..	..	..	19
..	..	..	1	2	2	2	3	..	3	4	29	3	..	2	1	..	2	..	...	3	4	..	..	91
..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	...	..	..	..	..	..	..	..	5
..	..	...	..	..	2	..	1	..	..	1	2	1	..	..	..	..	..	..	..	..	1	..	..	14
..	..	..	1	..	...	..	1	..	1	1	8	..	..	1	..	..	..	..	..	..	..	..	..	21
1	..	..	8	2	5	6	8	..	4	20	45	14	..	3	..	..	2	..	4	2	2	..	1	237
..	..	..	..	..	..	1	1	..	..	..	9	1	..	..	1	..	..	..	..	..	..	1	..	25
2	..	2	117	4	17	109	16	1	5	110	499	30	..	9	5	..	8	1	7	8	12	2	..	2,033
..	..	..	5	1	1	7	1	..	..	13	25	4	..	..	..	..	..	..	..	1	1	1	..	100
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE of Deaths by DISEASE and

Title of Orders.	Occupation or Trade of Family.	GENERAL DISEASES.															
					FEVER.												
		Small-pox.	Measles.	Plague.	Scarlet Fever.	Enteric Fever.	Malarial Fever.	Ague and Remittent Fever.	Relapsing Fever.	Influenza.	Whooping Cough.	Diphtheria.	Cholera.	Diarrhœa.	Dysentery.	Puerperal Septicæmia.	Leprosy.
Art	34 (a) Engineers, Photographers, Electricians, Architects	..	..	1	..	1	..	8	..	..	..	..	..	2	..	..	..
	35 (b) Builders in Boats, Houses, Coaches, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	36 (c) Watchmakers, Gilders, Engravers, &c.	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..
	37 (d) Metal Workers	1	..	37	..	1	1	14	..	..	..	..	..	8	7	..	..
	38 (e) Wood Workers	2	..	51	..	2	4	35	..	..	..	..	1	13	9	..	..
	39 (f) Stone Workers (Precious) ..	..	..	11	..	..	..	5	..	..	..	..	1	..	..	..	..
	40 (g) Leather Workers	..	..	22	..	..	..	12	..	..	..	..	..	9	3	..	..
	41 (h) Earth, Stone, Clay, &c., Workers	..	..	..	..	..	2	2	..	..	..	..	1	4	..	..	..
	42 (i) Textile Fabrics (Cotton, Silk, &c.), Workers	..	..	1	..	..	..	3	..	..	..	..	..	2	1	..	..
	43 (j) Dyers, Painters, &c.	..	..	14	..	..	1	10	..	..	..	..	1	2	7	..	..
	44 (k) Glass Workers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	45 (l) Salt Workers	..	...	..	..	..	..	1	..	..	..	..	..	..	..	..	..
	46 (m) Water Workers	..	..	2	..	..	2	2	..	..	..	..	..	1	1	...	..
	47 (n) Miscellaneous Workers ..	1	..	66	..	1	3	37	..	..	..	..	3	14	12	..	1
	48 (o) Players, Actors, Dancers, Prostitutes, &c.	..	..	1	..	..	1	..	..	..	..	..	1	2	2	1	..
Agriculture ..	49 (a) Gardeners, Cultivators, Farmers, &c.	..	..	17	..	..	..	9	..	..	..	..	2	10	7	1	16
	50 (b) Grass, Hay, Forage, &c., Dealers	..	..	..	..	..	..	2	..	..	..	..	1	..	1	..	2
Other and unspecified.	51 (a) Barbers, Washers, Tailors, Cooks, Bakers, &c.	12	..	105	..	4	13	79	..	..	..	..	18	32	23	11	1
	52 (b) General Labourers	24	..	384	..	1	12	322	..	..	..	..	29	96	60	10	7
	53 (c) Domestic Servants, Bhistis, &c.	11	..	48	..	1	5	32	..	..	..	..	..	15	1	1	1
	54 (d) Servants not otherwise described	5	..	230	..	4	9	104	..	..	..	..	9	48	27	2	..
	55 (e) Municipal Bigaries, Halalkhors &c.	1	..	26	..	2	1	21	..	..	..	..	4	18	10	2	2
Persons of independent means.	56 (a) Landlords	..	..	2	..	..	..	4	..	..	..	..	2	3	2	..	..
	57 (b) Pensioners	..	..	1	..	2	..	4	..	..	..	..	..	4	1	..	..
	58 (c) Mendicants, &c.	..	..	19	..	..	8	25	..	..	..	..	3	47	19	..	7
Others	59 (a) Students	3	..	34	..	11	1	23	..	1	..	..	4	1	5	..	1
	60 (b) Prisoners and Convicts ..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	...	..
	61 (c) Others (Pilgrims, Travellers, etc.)	13	..	..	..	..	7	16	....	..	..	..	2	44	18	..	..
	62 Persons following no occupations—Male ..	4	..	103	..	2	23	55	..	..	..	..	4	89	50	1	17
	63 Do. no occupations—Female ..	19	..	383	..	29	36	355	..	2	..	..	42	335	125	238	3
	64 Do. no occupations—Children ..	118	263	386	..	21	35	596	..	..	10	2	22	1,126	340		3
	Total ..	252	263	2,941	..	147	213	2,517	..	3	10	2	221	2,201	901	291	68

—concld.

OCCUPATION in 1914—*concluded.*

							LOCAL DISEASES.												INJURIES.					
										RESPIRATORY SYSTEM.									GENERAL.					
Cancer.	Premature Birth.	Debility.	Old Age.	Tubercle of Lungs.	Other Tubercular Diseases.	Other General Diseases.	Nervous System.	Diseases of the Eye, Ear and Nose.	Circulatory System.	Phthisis.	Other Diseases of the Respiratory System.	Digestive System.	Lymphatic System.	Urinary System.	Generative System.	Still-born.	Organs of Locomotion and Connective Tissue.	Other Local Diseases.	Drowning.	Other General Injuries	Local Injuries.	Poison.	Unspecified Causes.	TOTAL.
..	..	..	..	..	1	5	2	..	1	..	2	3	..	2	..	..	..	..	..	..	1	1	..	25
..	..	..	..	..	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	4
..	..	..	..	1	..	1	..	..	1	1	2	1	..	..	..	..	..	..	..	..	..	..	..	9
1	..	1	17	2	3	11	8	..	2	14	72	10	..	5	2	..	..	..	2	2	1	1	1	294
..	..	..	24	4	4	12	9	1	5	22	74	18	..	2	..	..	2	1	1	2	1	1	..	300
..	..	..	6	..	1	1	..	..	1	3	8	2	..	..	..	..	..	..	..	..	..	..	..	39
1	..	..	15	..	1	6	1	..	2	7	39	10	..	1	..	..	..	..	..	1	1	1	..	132
..	..	..	..	..	..	1	..	..	..	..	7	..	..	1	..	..	..	..	..	..	..	..	..	18
..	..	..	3	..	2	2	..	..	1	4	10	3	..	..	..	..	..	..	..	..	1	..	..	33
..	..	..	8	..	1	5	1	..	3	6	30	4	..	1	1	..	1	..	..	3	2	..	..	101
..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
..	..	..	..	..	..	1	..	..	..	..	3	..	..	3	..	..	..	..	..	..	..	..	..	15
..	..	..	32	2	3	13	5	..	5	19	96	13	1	1	2	..	1	..	..	3	2	..	..	336
..	..	..	..	..	2	2	2	..	..	12	15	2	..	..	1	..	..	1	..	1	3	1	1	51
..	..	..	16	1	..	6	7	..	4	6	35	6	..	..	1	..	..	..	..	1	..	..	..	145
..	..	..	2	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	10
2	..	..	99	12	13	29	14	..	17	47	247	25	..	8	2	..	3	..	..	6	1	3	1	827
2	..	4	105	17	26	70	27	..	9	89	567	42	..	18	6	..	9	1	5	39	24	2	5	2,012
..	..	1	12	4	8	15	8	..	11	24	82	11	..	8	1	..	..	1	..	4	4	3	1	313
3	..	..	37	11	10	34	11	..	13	51	302	51	..	18	1	..	4	..	1	4	3	1	1	994
..	..	..	14	1	..	10	3	..	4	18	58	5	..	4	..	..	1	..	1	1	2	3	..	212
1	..	1	6	14	..	4	2	..	1	6	12	4	..	2	..	..	..	..	..	1	..	1	..	68
2	..	..	38	..	1	8	8	..	3	1	35	6	..	4	..	..	..	..	1	..	..	..	..	119
..	..	5	56	..	13	22	11	..	3	41	129	8	..	14	..	..	3	1	..	20	5	..	3	462
..	..	..	..	2	5	10	6	..	5	7	17	8	..	3	..	..	1	..	..	1	1	3	..	152
..	..	..	1	1	1	..	1	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	9
..	..	1	14	7	1	2	..	..	1	..	13	..	..	3	1	..	..	..	..	14	..	..	3	160
9	..	7	148	26	41	52	45	..	20	57	208	57	..	22	5	..	4	2	17	47	5	3	9	1,132
33	..	16	762	44	109	492	135	..	67	520	1,110	207	3	112	106	..	15	4	13	45	17	3	4	5,384
..	187	2,217	..	7	48	1,198	1,493	1	10	73	4,088	464	..	18	3	..	9	4	12	56	15	8	5	12,840
68	187	2,261	1,772	136	369	2,278	1,935	4	298	1,334	8,734	1,183	6	322	147	..	71	21	77	313	156	62	39	31,353

TABLE of DEATHS by Race, Age and Sex in 1914.

RACE.	AGES.																					
	1 to 30 days.		1 to 6 months.		7 to 12 months.		1 to 2 years.		2 to 3 years.		3 to 4 years.		4 to 5 years.		5 to 10 years.		10 to 15 years.		15 to 20 years.		20 to 25 years.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Jains	28	26	59	39	64	69	39	29	13	6	8	6	2	4	20	19	35	16	97	64	82	42
Brahmins	43	33	46	38	44	46	38	15	9	13	8	4	8	8	14	20	21	20	64	46	65	48
Lingaits	4	6	7	6	2	8	7	3	5	4	...	2	2	4	8	3	5	1	3	6	5	6
Bhatias	4	8	13	8	11	7	4	9	2	...	...	1	1	...	5	3	5	10	3	18	10	8
Hindus of other Castes ...	712	547	513	466	567	586	436	475	202	236	116	120	94	100	266	310	269	226	743	460	945	511
Hindus, Low Caste	221	173	166	224	235	265	195	180	95	94	34	39	34	15	75	100	55	51	99	121	154	119
Mussalmans	271	203	269	228	268	237	203	197	79	97	50	43	34	37	120	142	119	134	230	302	237	311
Parsees	38	35	40	24	44	59	51	30	12	10	4	5	4	4	14	18	9	7	20	14	16	26
Jews	8	8	2	5	9	6	9	12	1	1	...	3	2	...	1	8	2	4	4	2	6	12
Native Christians	83	80	87	97	38	49	33	34	14	12	3	12	8	6	20	24	30	16	72	46	59	69
Eurasians	5	2	5	7	6	7	2	2	...	1	1	...	...	...	1	3	2	2	1	1	3	2
Europeans	9	10	5	2	9	4	6	4	2	2	4	1	1	...	1	1	1	...	3	1	16	7
Negro-Africans	...	...	2	...	1	1	...	...	...	...	...	...	...	...	...	2	...	...	...	1	2	2
Buddhists	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...
Other and Unknown Castes ...	12	13	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All Castes ... Males ...	1,439	...	1,215	...	1,298	...	1,023	...	434	...	228	...	190	...	545	...	553	...	1,339	...	1,653	...
All Castes ... Females ...	...	1,149	...	1,145	...	1,334	...	1,010	...	476	...	236	...	178	...	653	...	487	...	1,082	...	1,163
All Castes ... Persons ...	2,588		2,360		2,632		2,033		910		464		368		1,198		1,040		2,421		2,816	

29—*concluded.*

TABLE of DEATHS by Race, Age and Sex in 1914—*concluded.*

Race.	Ages—*concld.*																				
	25 to 30 years.		30 to 35 years.		35 to 40 years.		40 to 45 years.		45 to 50 years.		50 to 55 years.		55 to 60 years.		60 and over.		Unspecified Ages.		All Ages.		Persons.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Jains	58	29	46	21	31	25	35	14	42	14	17	4	18	14	46	33	...	...	740	474	1,214
Brahmins	64	28	42	21	40	12	40	10	23	15	24	11	33	14	64	35	...	...	690	457	1,147
Lingaits	4	5	3	3	3	1	...	2	...	2	...	...	3	2	4	10	...	...	65	74	139
Bhatias	8	8	6	6	2	2	8	4	5	4	9	2	7	5	10	18	...	...	113	121	234
Hindus of Other Castes	859	394	607	267	502	215	359	140	340	218	192	86	323	252	514	615	...	1	8,559	6,225	14,784
Hindus, Low Caste	159	103	117	65	101	47	45	25	77	47	22	8	68	87	92	106	...	...	2,044	1,864	3,908
Mussalmans	352	279	259	166	278	144	176	79	232	140	96	35	282	140	420	351	1	...	4,026	3,260	7,286
Parsees	30	21	22	27	30	20	26	18	26	18	31	34	42	24	140	144	...	...	599	538	1,137
Jews	2	10	6	4	5	4	4	3	2	1	4	2	5	1	11	14	...	...	83	100	183
Native Christians	55	55	46	19	26	24	45	22	38	27	19	15	28	23	43	38	...	...	747	668	1,415
Eurasians	2	4	6	2	3	7	4	2	3	6	3	3	6	5	3	7	...	...	56	63	119
Europeans	10	4	17	4	20	1	10	6	8	4	5	2	6	4	13	15	...	...	146	72	218
Negro-Africans	4	1	1	1	1	1	...	...	...	2	...	...	...	...	3	...	...	...	14	11	25
Buddhists	2	1	...	...	1	...	1	...	...	...	...	...	...	...	1	...	...	...	10	1	11
Other and Unknown Castes ...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	4	1	18	15	33
All Castes. Males	1,609	...	1,179	...	1,044	...	753	...	796	...	422	...	821	...	1,364	...	5	...	17,910	...	
All Castes. Females	...	942	...	606	...	503	...	325	...	498	...	197	...	571	...	1,386	...	2	...	13,943	
All Castes. Persons	2,551		1,785		1,547		1,078		1,294		619		1,392		2,750		7				31,853

TABLE showing by Race the Rate of Mortality per 1,000 of Population from different Death Causes in 1914.

Race or Caste.	Small-pox.	Measles.	Plague.	All Fevers.	Scarlet.	Enteric.	Malaria.	Ague and Remittent.	Relapsing.	Cholera.	Diarrhœa.	Dysentery.	Phthisis.	Other Respiratory Diseases.	Accidents.	All Other Causes.	All Causes.
Jains	·09	·24	8·69	4·39	.....	·58	·29	3·51	.....	·24	2·68	1·36	1·71	19·40	1·31	19·15	59·33
Brahmins	·07	·31	2·21	2·03	.....	·13	·18	1·71	.....	·14	1·30	·78	·78	5·70	·27	7·73	21·37
Lingaits	.....	1·69	11·02	14·41	.....	.....	·84	13·57	.....	.....	9·32	3·39	6·78	27·14	2·54	41·56	117·89
Bhatias	.....	·12	1·02	3·08	.....	·38	·51	2·18	.....	.....	1·28	·77	1·41	9·64	·64	12·08	30·07
Hindus of other Castes	·26	·21	3·24	2·71	.....	·04	·15	2·51	.....	·25	1·77	·73	1·18	7·50	·55	8·58	27·02
Hindus, Low Castes...	·30	1·30	3·36	5·51	.....	.....	·12	5·38	.....	·25	6·61	1·93	3·02	23·67	1·10	21·84	72·05
Hindus, All Castes...	*·25*	*·30*	*3·56*	*2·95*	.....	*·07*	*·16*	*2·72*	.....	*·24*	*2·15*	*·85*	*1·32*	*9·05*	*·60*	*9·97*	*31·30*
Mussalmans	·17	·18	1·85	2·95	.....	·04	·22	2·68	.....	·11	2·86	1·19	2·74	10·83	·70	17·14	40·76
Parsees	·03	·09	1·11	2·10	.....	·56	·53	1·00	.....	·13	1·47	·54	·43	4·00	·53	11·83	22·32
Jews	.....	·15	·60	2·57	.....	·30	.....	2·27	.....	·30	2·88	·75	·90	4·85	·45	14·24	27·73
Native Christians	1·01	·26	2·47	3·51	.....	·60	·48	2·42	.....	·53	2·44	·94	2·01	7·19	·33	13·54	34·28
Eurasians	.....	·23	·95	3·10	.....	1·67	·47	·95	.....	·23	2·38	·95	1·19	5·49	.....	13·84	28·41
Europeans	·25	·08	·16	3·19	.....	2·27	·84	·08	.....	·16	·58	1·93	·42	2·10	1·17	8·23	18·32
Buddhists	.....	.....	.....	3·46	.....	1·73	.....	1·73	.....	.....	.....	.....	1·73	1·73	.....	12·11	19·03
Other and Unknown Castes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7·35	.....	.....	66·17	95·58	73·52	242·64
Total ...	·25	·26	3·00	2·93	.....	·14	·21	2·56	.....	·22	2·24	·91	1·55	8·91	·62	11·57	32·52

TABLE of BIRTHS in different months by Caste and Sex in 1914.

MONTHS.	Jains.		Brahmins.		Lingaits.		Bhatias.		Hindus of other Castes.		Hindus, Low Caste.		Mussalmans.		Parsees.		Jews.		Native Christians.		Eurasians.		Europeans.		Negro-Africans.		Buddhists.		Other and unknown Castes.		TOTAL.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
January	16	18	26	25	5	3	2	6	469	459	130	144	195	197	57	41	14	8	47	56	7	5	5	9	...	...	...	...	1	...	974	971	1,945
February	15	12	7	15	2	1	6	7	376	404	96	88	163	141	53	44	8	11	37	27	2	6	7	5	1	...	...	...	...	...	773	761	1,534
March	16	15	16	17	1	3	6	5	384	349	119	111	138	133	31	49	9	7	43	46	5	2	4	4	...	...	...	...	...	...	772	741	1,513
April	6	12	22	22	2	...	5	2	375	331	93	109	130	118	50	51	10	11	33	36	3	2	8	6	...	...	...	...	1	1	738	701	1,439
May	17	11	20	18	1	...	4	...	314	346	93	107	133	111	40	46	10	4	40	48	4	6	6	8	...	...	...	...	...	1	682	706	1,388
June	13	11	12	14	...	...	4	5	347	320	102	95	149	126	53	55	8	3	43	41	7	3	9	4	...	...	1	...	1	...	749	677	1,426
July	12	11	18	17	...	...	7	6	353	366	94	126	145	128	58	64	13	6	48	51	6	5	5	7	...	...	...	...	1	2	763	789	1,552
August	20	15	17	18	...	...	3	5	384	383	110	120	180	160	57	55	14	9	48	40	8	6	9	9	...	1	1	2	...	...	851	823	1,674
September... ...	13	20	23	13	...	...	3	7	370	361	124	139	156	168	59	65	11	10	42	48	7	3	8	12	...	...	...	...	...	2	816	848	1,664
October	13	17	25	18	2	...	6	6	431	415	147	142	179	196	73	87	15	8	45	53	9	6	10	10	...	...	...	...	1	1	955	959	1,914
November	19	19	26	21	...	1	2	8	390	373	159	123	156	170	70	73	11	12	50	54	9	4	10	11	...	...	1	1	1	...	904	870	1,774
December	16	9	25	20	2	1	6	13	402	407	137	129	189	169	75	77	17	9	60	54	8	8	7	15	...	...	...	...	...	1	944	912	1,856
Total ... Males ...	176	...	237	...	15	...	54	...	4,598	...	1,404	...	1,913	...	675	...	140	...	536	...	75	...	88	...	1	...	3	...	6	...	9,921	...	
Total ... Females.	...	170	...	218	...		...	70	...	4,514	...	1,433	...	1,817	...	707	...	98	...	554	...	56	...	100	...	1	...	3	...	8	...	9,758	
Total ... Persons.	346		455		24		124		9,112		2,837		3,730		1,382		238		1,090		131		188		2		6		14				19,679

TABLE showing the number of Still-Births by Race and Month in 1914.

MONTHS.	MALES.																	FEMALES.																PERSONS.															
	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Other and Unknown Castes.	Total.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Other and Unknown Castes.	Total.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Other and Unknown Castes.	Total.
January.. ..	3	3	..	5	35	5	20	2	..	6	1	1	..	..	1	82	3	2	..	..	31	7	13	2	..	3	..	..	..	..	1	62	6	5	..	5	66	12	33	4	..	9	1	1	..	..	2	144
February ..	..	..	1	1	33	6	16	5	1	1	..	..	..	..	3	67	2	1	..	1	26	7	7	2	1	3	..	..	1	..	1	52	2	1	1	2	59	13	23	7	2	4	..	..	1	..	4	119
March	3	3	..	..	27	11	24	2	..	3	..	..	..	..	1	74	1	3	1	..	19	2	10	2	..	1	..	..	..	..	..	39	4	6	1	..	46	13	34	4	..	4	..	..	..	..	1	113
April	..	2	..	1	32	12	11	1	..	4	..	..	..	..	2	65	..	..	..	..	31	10	10	2	..	3	..	..	..	..	1	57	..	2	..	1	63	22	21	3	..	7	..	..	..	..	3	122
May	1	2	..	1	20	15	11	2	..	5	..	1	..	..	..	58	..	..	..	..	27	5	9	4	..	1	..	2	..	..	..	48	1	2	..	1	47	20	20	6	..	6	..	3	..	..	..	106
June	3	1	..	1	24	15	15	3	..	1	1	..	..	..	1	65	1	..	..	..	21	4	7	1	..	5	..	1	..	..	2	42	4	1	..	1	45	19	22	4	..	6	1	1	..	..	3	107
July	2	1	..	..	38	23	14	2	2	3	1	..	..	..	..	86	1	..	..	..	19	15	6	5	1	4	1	..	..	..	1	53	3	1	..	..	57	38	20	7	3	7	2	..	..	..	1	139
August	1	5	1	1	44	13	16	3	..	1	..	2	..	..	1	88	2	2	..	..	30	13	12	2	..	2	1	1	..	..	1	66	3	7	1	1	74	26	26	5	..	3	1	3	..	..	2	154
September ..	2	2	..	..	40	17	25	6	..	3	..	2	..	..	4	101	4	5	..	..	30	9	11	3	1	5	..	..	..	..	2	70	6	7	..	..	70	26	36	9	1	8	..	2	..	..	6	171
October	3	3	..	1	32	10	13	4	1	2	2	..	..	..	3	74	..	..	..	1	21	14	17	8	..	2	..	..	..	..	2	65	3	3	..	2	53	24	30	12	1	4	2	..	..	..	5	139
November ..	2	3	1	..	32	9	22	1	.	3	..	..	..	..	1	74	..	2	..	2	22	6	12	3	..	8	..	..	..	..	1	56	2	5	1	2	54	15	34	4	..	11	..	..	..	..	2	130
December ..	2	3	..	..	26	11	16	5	2	6	..	1	..	..	2	74	1	..	..	..	22	6	9	2	..	1	..	1	..	..	1	43	3	3	..	..	48	17	25	7	2	7	..	2	..	..	3	117
Total ..	22	28	3	11	383	147	203	36	6	38	5	7	..	..	19	908	15	15	1	4	299	98	123	36	3	38	2	5	1	..	13	653	37	43	4	15	682	245	326	72	9	76	7	12	1	..	32	1,561

TABLE showing the number of Still-births by Section and Month in 1914.

MONTHS	A					B				C						D					E							F			G		Harbour, Docks, Railways and Homeless.	Total.
	Upper Colaba.	Middle and Lower Colaba.	Fort, South.	Fort, North.	Esplanade.	Mandvi.	Chukla.	Umarkhadi.	Dongri.	Market.	Dhobi Talao.	Fanaswadi.	Bhuleshwar.	Khara Talao.	Kumbharwada.	Khetwadi.	Girgaum.	Chowpati.	Walkeshwar.	Mahalakshmi.	Mazagon.	Tarwadi.	2nd Nagpada.	Kamathipura.	Tardeo.	Byculla.	1st Nagpada.	Parel.	Sewri.	Sion.	Mahim.	Worli.		
January ..	..	2	1	6	1	4	5	6	5	..	4	5	6	5	3	2	8	2	2	8	7	4	4	7	1	18	2	7	1	..	12	5	1	144
February ..	..	2	..	4	..	3	2	3	3	1	7	2	3	4	5	6	5	..	..	4	2	5	1	4	4	12	1	9	6	6	5	10	..	119
March ..	..	..	..	2	..	5	8	12	2	1	3	3	4	2	3	3	3	1	2	4	3	7	3	6	1	17	..	3	1	4	2	8	..	113
April ..	..	..	..	3	2	1	3	7	4	1	7	4	1	2	2	1	7	..	..	3	6	7	1	10	4	15	1	6	1	1	5	17	..	122
May	..	4	..	2	2	3	5	6	3	1	8	2	6	2	3	4	1	3	3	2	2	1	3	6	4	9	1	5	1	4	1	9	..	106
June	..	1	1	..	3	3	2	7	3	3	7	2	4	2	3	4	3	..	1	2	2	4	4	7	5	14	..	4	1	2	1	12	..	107
July	..	6	..	3	1	..	1	7	6	5	8	1	2	..	2	2	3	..	2	3	7	1	8	8	3	14	2	10	..	4	8	22	..	139
August ..	2	3	1	5	1	2	2	5	4	2	5	2	1	5	4	6	4	6	1	3	6	7	9	7	8	14	1	11	4	3	6	14	..	154
September ..	1	8	1	5	2	1	8	7	2	3	8	8	6	4	5	7	6	..	1	5	7	5	7	10	6	17	1	8	2	3	3	11	...	171
October ..	2	2	..	5	1	2	2	14	2	2	5	2	9	8	3	4	4	..	1	5	3	7	4	8	7	7	1	6	3	8	3	9	..	139
November ..	..	4	..	5	3	3	3	5	2	..	2	2	5	7	3	7	1	7	..	1	4	3	2	4	4	16	2	3	4	5	6	17	..	130
December ..	..	1	..	6	2	2	1	13	3	1	4	1	3	4	4	4	5	2	3	6	3	3	1	5	5	9	..	6	1	3	6	10	..	11
Total ..	5	38	4	45	18	29	42	92	39	20	68	34	50	45	40	50	50	24	16	46	52	64	47	82	52	162	12	78	25	43	58	144	1	1,561

STATEMENT showing the number of DEATHS from Principal Causes in different Hospitals in the City of Bombay in 1914.

HOSPITALS.	GENERAL DISEASES.																						LOCAL DISEASES																											
	Still-born.		Small-pox.		Measles.		Plague.		Fevers.		Cholera.		Diarrhœa and Dysentery.		Puerperal Septicæmia.		Leprosy.		Premature Birth.		Other General Diseases.		Nervous System.		Circulatory System.		Phthisis.		Other Diseases of the Respiratory System.		Digestive System.		Urinary System.		Generative System.		Other Local Diseases.		Injuries.		Unspecified Causes.		TOTAL.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
Adams Wylie Memorial Hospital.	..	..	..	..	..	..	..	..	4	.	..	..	23	11	..	..	..	..	..	..	18	9	1	..	2	..	48	11	24	4	6	..	4	1	..	..	4	1	..	..	..	..	134	37	171
Albless Cama Hospital ..	72	45	..	..	..	..	..	2	..	2	..	..	1	2	..	6	..	..	24	20	15	38	6	14	..	15	3	29	3	12	3	17	..	8	..	10	1	2	..	2	..	1	56	180	236
Arthur Road Hospital ..	1	..	51	20	2	1	3	..	5	2	33	12	25	3	..	..	..	..	..	1	4	3	15	..	..	1	5	2	11	1	1	..	2	..	..	..	..	..	..	..	..	..	157	46	203
Ayurvedic Hospital ..	1	..	1	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3
Bai Motlabai and Sir D. M. Petit Hospital	68	60	..	..	..	..	..	..	..	..	..	..	7	6	..	6	..	..	16	9	10	18	4	5	..	2	2	6	9	12	5	6	1	..	..	11	1	..	2	3	..	..	57	84	141
Bai Rukshamani Lying-in Hospital	3	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	6	2	3	6	2	2	..	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	..	11	14	25
Dr. Bhajekar's Hospital ..	..	..	..	..	..	.	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	6
B. D. Petit Parsee General Hospital	3	4	..	..	..	..	..	..	5	2	..	..	5	1	..	..	..	..	..	..	14	4	5	2	..	..	..	1	10	3	10	6	1	3	1	1	1	..	..	..	..	..	52	23	75
Colaba Lunatic Asylum ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Colaba Station Hospital ..	1	1	..	..	..	..	1	..	1	1	..	..	4	..	..	1	..	..	1	..	3	1	2	..	..	..	3	..	4	1	.	..	.	1	..	1	..	..	2	..	..	..	21	6	27
Goculdas Tejpal Hospital.	.	..	..	..	..	..	2	..	21	2	1	..	89	16	1	.	..	..	..	..	42	9	14	..	5	..	43	8	39	10	12	1	16	6	6	..	7	..	26	12	..	..	374	64	438
Sir J. J. Hospital ..	1	..	..	..	..	..	3	..	33	7	1	..	96	30	..	..	..	..	..	..	125	45	36	8	23	9	137	44	188	35	74	17	19	14	8	1	18	6	34	11	1	..	796	227	1,023
Dr. Kerrawalla's Hospital.	5	5	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	2	..	1	..	..	2	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	4	8	12
Matunga Leper Asylum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	38	12	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	38	13	51
Maratha Hospital	..	..	..	..	..	..	274	62	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	280	63	343
Dr. Masina's Hospital ..	4	8	..	..	..	..	..	..	3	6	..	..	2	..	..	..	..	..	4	5	10	8	2	3	3	..	1	1	5	3	7	4	..	8	3	5	..	..	2	1	..	..	42	44	86
Dr. Parakh's Hospital ..	4	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	...	...	4	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	8	4	12
Parsee Fever Hospital ..	..	..	..	..	..	..	16	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	6	22
Parsee Lying-in-Hospital..	15	13	..	..	..	..	1	..	2	2	..	..	..	1	..	..	..	..	3	2	2	3	3	2	..	..	..	1	2	4	3	..	..	..	..	..	..	..	..	..	..	..	15	15	30
Police Hospital	..	..	..	..	...	..	..	..	.	..	..	..	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	12	1	..	..	..	..	..	..	..	..	..	..	..	...	17	1	18
Dr. Purandare's Hospital	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	...	.	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..	1	1
St. John's Hospital ..	..	1	..	..	..	..	..	..	..	.	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2	1	..	..	..	..	...	..	..	..	..	..	..	..	3	3	6
St. Joseph's Foundling Home	..	..	..	..	..	..	..	..	15	26	..	..	4	15	..	..	..	..	..	..	27	42	..	1	..	..	..	..	6	8	1	2	1	..	..	..	..	..	..	..	..	..	54	94	148
St. George's Hospital ..	4	2	3	..	..	..	..	..	26	8	..	..	9	6	..	..	..	..	2	2	3	7	1	3	5	1	10	2	12	3	14	4	1	..	..	..	..	..	2	..	..	..	88	36	124
Seva-Sadan Hospital ..	..	..	..	...	..	..	..	..	..	..	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..	..	...	..	..
Marine Lines Infantry Hospital	..	..	..	..	..	..	..	..	..	..	..	..	1	...	..	..	..	..	..	..	..	..	...	..	...	...	..	..	..	..	..	...	..	..	..	..	..	...	..	..	..	..	1	..	1
2nd Rajput Light Infantry Hospital	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	...	..	..	..	..	..	..	..	...	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1
Memon General Hospital.	..	..	..	..	..	..	..	..	..	..	...	...	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	...	..	..	..	..	..	..	..	..	...	..	..	..	..	..	3	..	3
Lady Hardinge War Hospital	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	..	..	..	1	..	1
Haji Esmail Gul-Mohad. M. Hospital	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	...	..	..	..	..	..	..	1	..	1
TOTAL.. Males ..	188	..	55	..	2	..	300	..	116	..	35	..	270	..	1	..	38	...	62	..	284	..	100	..	38	..	253	..	378	..	137	..	46	..	18	..	32	..	69	..	1	..	2,235	..	
TOTAL.. Females ..	..	144	..	20	..	1	..	70	..	59	..	12	..	93	..	13	..	12	..	45	..	193	..	42	..	31	..	106	..	102	..	57	..	41	..	32	..	9	..	29	..	1	..	973	
TOTAL.. Persons ..	332		75		3		370		175		47		363		14		50		107		482		142		69		359		480		194		87		50		41		98		2				3,208

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TABLE showing the Number of Plague Deaths by Streets and Races during 1914.

Locality.				Races.															
Ward.	Section.	Street.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Unknown.	Total.
		Upper Colaba.																	
A	Upper Colaba.	Colaba Road	1,567	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	3
		Station Hospital		...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
		Middle and Lower Colaba.																	
	Middle and Lower Colaba.	Bora Street	19,579	...	...	...	...	10	...	1	...	...	...	...	...	...	...	...	11
		Bora Cross Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Colaba Causeway		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Colaba Road		...	...	...	...	6	2	...	...	...	1	...	...	...	...	...	9
		Colaba Cross Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Grant's Buildings		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Gun Carriage Street		...	...	...	...	12	...	...	...	...	...	...	...	...	...	...	12
		Hamal Lane		...	...	...	...	15	...	...	...	...	...	...	...	...	...	...	15
		Koli Lane, 1st		...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	3
A		Koli Lane, 2nd		...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		Koli Lane, 5th		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Manekji Street		...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
		Nowroji Street		...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
		Pestonji Street...		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Sassoon Dock Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Shroff Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Thomas Street		...	...	...	...	6	...	1	...	...	...	...	...	...	...	...	7
		Victoria Bunder		...	...	...	...	14	1	...	...	...	...	...	...	...	...	...	15
		Wellington Mews		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Wodehouse Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Fort, South.																	
	Fort, South.	Apollo Pier Road	3,462	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Apollo Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Armenian Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
A		Bake-house Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Dalal Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Esplanade Road		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
		Humum Street...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Tamarind Lane...		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Fort, North.																	
	Fort, North.	Bhoiwar Lane	25,400	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Bazar Gate Street		...	...	...	...	3	...	...	2	...	1	...	...	...	...	...	6
		Bomanji Lane		...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	3
		Bora Bazar Street		...	2	...	...	11	...	...	1	...	...	...	...	...	...	...	14
		Cawasji Patel Street		...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	4
		Chana Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Cochin Street		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Fort Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Frere Road		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Ghoga Street		...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	2
		Goa Street		...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
		Gola Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Homji Street		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Hornby Road		...	...	...	...	4	1	...	...	...	1	...	...	...	...	...	6
A		Jijibhoy Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Jiwaji Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Kavakhana Lane		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Mangesh Senoi Street... ...		...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2
		Manglore Street		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Maruty Lane		...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	7
		Manordas Street		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Mint Road		...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
		Mody Street		...	1	...	...	3	...	2	4	...	...	...	...	...	...	...	10
		New Docks		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Nicol Road		...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	3
		Parsi Bazar Street		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Parsi Panchayat Lane ...		...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	2
		Pitha Street		...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
		Police Court Lane		...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	2

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1914—*continued.*

Locality.				Races.															
Ward.	Section.	Street.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Unknown.	Total.
		Esplanade.																	
A	Esplanade.	Alexandra Docks	17,761	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Bori Bunder Ry. Compound ...		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Carnac Road		...	...	...	...	4	1	...	...	...	...	...	...	...	...	...	5
		Carnegy Lines		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Cooperage Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Crawford Market		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Frere Road		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
		Fort Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Hornby Road		...	1	...	...	4	...	...	...	...	1	...	...	...	...	...	6
		Marine Lines		...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	2
		Paltan Road		...	...	...	...	...	9	...	...	...	...	...	...	...	...	...	9
		Victoria Docks...		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Mandvi.																	
B	Mandvi.	Argyle Road	33,202	...	1	...	...	1	5	...	...	...	...	...	...	...	...	...	7
		Bardan Galli		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Bhandari Street		...	...	...	...	1	2	1	...	...	...	...	...	...	...	...	4
		Bhandup Street		...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	3
		Broach Street		...	1	...	...	1	6	...	...	...	...	...	...	...	...	...	8
		Chukla Street		1	1	...	...	1	1	3	...	...	...	...	...	...	...	...	7
		Chukla Cross Lane		...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		Chinch Bunder Road		1	...	...	...	9	1	...	...	...	...	...	...	...	...	...	11
		Chinch Bunder Road 2nd ...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Clive Road		1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Clive 2nd Cross Lane... ...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Dana Bunder Road Side ...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Daryastan Street		...	2	...	...	1	3	...	...	...	...	...	...	...	...	...	6
		DeSouza Street		...	1	...	...	5	1	...	...	...	...	...	...	...	...	...	7
		DeSouza 1st Cross Lane ...		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Dongri Road		2	...	...	...	7	2	1	...	...	...	...	...	...	...	...	12
		Dontad Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Dontad Cross Lane		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Garibdas Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Isaji Street		...	...	...	...	4	1	...	...	...	...	...	...	...	...	...	5
		Israil Moholla		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Jambli Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Jambli 1st Cross Lane ...		...	...	...	...	...	1	...	...	...		...	...	...	...	...	1
		Janjikar Street		...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	3
		Kazi Sayad Street		1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	3
		Koliwada Road Side		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Koliwada 2nd Cross Lane ...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Masjid Bunder Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Masjid Siding Road		...	...	...	...	2	4		...	...	...	...	...	...	...	...	6
		Musjid Station Road		...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	4
		Old Bengalpura Street ...		1	...	...	...	3	2	5	...	...	...	...	...	...	...	...	11
		Pydhoni Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		1st Samuel Street		...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
		2nd Samuel Street		...	1	...	...	2	2	3	...	...	...	...	...	...	...	...	8
		Sayad Mukri Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Surat Street		...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		Chukla.																	
B	Chukla.	Abdul Rehman Street... ...	24,231	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
		Bhajee Pala Street		2	...	...	...	3	...	3	...	...	...	...	...	...	...	...	8
		Carnac Road		...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	2
		Chukla Street		...	1	...	...	...	...	3	...	...	...	...	...	...	...	...	4
		Husseinkhan Khalipa Street...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Jakeria Masjid Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Kolsa Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Memonwada Road		2	...	...	...	4	2	2	...	...	...	...	...	...	...	...	10
		Memonwada Cross Lane ...		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Nagdevi Street		...	...	...	...	2	...	8	...	...	...	...	...	...	...	...	10
		Nagdevi Cross Lane ...		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Nakhoda Street		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Narayen Dhuru Street... ...		...	...	...	...	2	...	2	...	...	...	...	...	...	...	...	4
		Sarang Street		...	...	...	...	...	...	7	...	...	...	...	...	...	...	...	7
		Tawa Lane		...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	3

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1914—*continued.*

Locality.				Races.															
Ward.	Section.	Street.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Unknown.	Total.
		Umarkhadi.																	
B	Umarkhadi.	Attar Galli	45,679	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Babula Tank Road		...	...	...	...	6	4	2	...	...	...	...	...	...	...	...	12
		B. B. Parel Road		...	...	...	2	1	3	1	...	...	...	...	...	...	...	...	7
		Choona Bhahattee		...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
		1st Chinch Bunder		...	...	...	1	...	...	2	...	...	...	...	...	...	...	...	3
		Dongri Road		...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	3
		Imamwada Road		...	...	...	...	...	4	5	...	...	...	...	...	...	...	...	9
		Jakeria Musjid Street		...	...	...	...	...	1	11	...	...	...	...	...	...	...	...	12
		Jail Road, South Cross ...		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		Jail Road, South		...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	4
		Jail Road, East...		...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	2
		Jail Road, West...		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Jail Road, North		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Kambeker Street		...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	6
		Memonwada Road		...	...	...	...	...	...	8	...	...	...	...	...	...	...	...	8
		Nishanpada Road		...	...	...	...	1	...	10	...	...	...	...	...	...	...	...	11
		New Bengalpoora		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Nagdevi Street...		...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	5
		Old Nagpada		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Piru Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Pydhoni Road		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Pattan Wadi		...	...	...	...	...	...	4	...	...	1	...	...	...	...	...	5
		Samuel Street		...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	4
		Tandel Street		...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	3
		Tantanpura		...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	2
		Umarkhadi Road		...	...	...	...	11	...	...	...	...	...	...	...	...	...	...	11
		Umarkhadi 1st Lane		...	...	...	...	2	...	...	...	1	2	...	...	...	...	...	5
		Do. 2nd Lane... ...		...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
		Do. Street		...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	3
		Dongri.																	
B	Dongri.	Argyle Road	27,246	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Chinch Bunder Road		1	...	...	...	10	...	...	...	...	...	...	...	...	...	...	11
		Clive Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Dongri Road		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Jail Road, East		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		1st Nowrojee Hill, North ...		...	...	...	...	15	...	...	...	...	...	...	...	...	...	...	15
		1st Nowrojee Hill, North Cross.		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		1st Nowrojee Hill, South ...		...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	9
		2nd Nowrojee Hill, North ...		...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	8
		1st N. Hill North Palm ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Mazgaon Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Sholapur Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Valpakhadi		...	...	...	...	...	3	1	...	...	...	...	...	...	...	...	4
		Market.																	
C	Market.	Abdul Rehaman Street ...	30,172	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	2
		Carnac Road		...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	3
		Champawadi Cross Lane ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Dhunjee Street		...	...	...	...	3	...	...	1	...	...	...	...	...	...	...	4
		Jambulwadi		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Kalbadevi Road		...	2	...	...	2	3	...	...	...	1	...	...	...	...	...	8
		Lad Wadi		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Market Road Side		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Mangaldas Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Masjid Bunder Road		...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	3
		Mirza Street		1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	3
		Mumbadevi Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		New Hanuman Lane		1	...	...	...	1	3	...	...	...	...	...	...	...	...	...	5
		Old Hanuman Lane		...	1	...	...	5	3	2	...	...	...	...	...	...	...	...	11
		Old Hanuman 2nd Cross Lane.		...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	3
		Picket Road		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Shaik Memon Street		1	...	...	...	7	...	...	...	...	...	...	...	...	...	...	8
		Shamshet Street		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Sutar Chawl		...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	3
		Takwadi...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Telwadi		...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	3
		Vithaldas Road...		...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
		Vithalwadi Road		2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1914—*continued.*

Ward.	Section.	Locality. Street.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Unknown.	Total.
		Dhobi Talao.																	
	Dhobi Talao.	Cavel Street	38,684	...	2	...	...	14	...	...	...	...	2	...	...	...	...	...	18
		Chandanwady		...	...	...	...	13	...	1	1	...	1	...	...	...	...	...	16
		Dadysett Agiary Street ...		...	...	...	...	1	...	...	2	...	...	...	...	...	...	...	3
		Dadysantok Lane		...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	3
		1st Dhobi Talao Lane		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		2nd Dhobi Talao Lane ...		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
		Girgaum Road		...	...	...	...	3	...	...	6	...	2	...	...	...	...	...	11
		Hamalwady		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Jambulwady		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Kalbadevi Road		...	1	...	1	8	...	...	1	...	...	...	...	...	...	...	11
		Kolbhat Street		...	...	...	...	6	...	...	...	...	1	...	...	...	...	...	7
		Kolbhatwady		...	2	...	...	3	...	...	...	...	...	...	...	...	...	...	5
		1st Kolbhat Lane		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Lohar Street		...	...	...	...	2	...	...	...	...	2	...	...	...	...	...	4
		Mahadeo Shankerset Lane ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		1st Marine Lines		...	...	...	...	1	10	...	1	...	2	...	...	...	...	...	14
		1st Marine Crose Lane ...		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		2nd Marine Line		...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	3
		3rd Marine Line		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Popatwady		...	...	...	1	3	...	...	...	...	...	...	...	...	...	...	4
		Prince Street		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Ropane		...	...	...	...	1	...	...	...	...	3	...	...	...	...	...	4
		Sonapur Street		...	1	...	...	8	1	...	1	...	2	...	...	...	...	...	13
		Tripoli Street		...	...	...	...	2	...	...	...	...	4	...	...	...	...	...	6
		Wanar Moholla		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Wellington Street		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Fanaswady.																	
	Fanaswadi.	Anantwady	27,408	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2
		Bhasker Lane		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Bhaijiwanji's Lane		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Dukarwadye's		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
		Fanaswady Street		...	7	...	...	20	...	...	...	...	...	...	...	...	...	...	27
		2nd Fanaswady Lane		...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2
		Girgaum Road		...	2	...	...	7	...	...	...	...	1	...	...	...	...	...	10
C		Kumbhar Tukda Lane... ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		2nd Khatter Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Ladwadi		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Queen's Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Sonapur Street		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		1st Sonapur Cross Lane ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Thakurdwar Road		...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	7
		Zaoba's Wady		...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
		Bhuleshwar.																	
	Bhuleshwar.	Alli Umar Street	36,459	...	...	...	...	2	...	6	...	...	...	...	...	...	...	...	8
		Assembly Lane...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Bhendi Bazar Parel Road ...		...	1	...	...	5	1	2	...	...	...	...	...	...	...	...	9
		Bapoo Khote Street		2	...	...	...	7	...	1	...	...	...	...	...	...	...	...	10
		2nd Bhoiwada Lane		...	1	...	...	3	...	...	...	...	...	...	...	...	...	...	4
		3rd Bhoiwada Lane		1	...	...	...	4	...	...	...	...	...	...	...	...	...	...	5
		Bhuleshwar Road		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Cathedral Street		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Erskin Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Ghogari Street		...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	5
		1st Ghogari Cross Lane ...		...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	3
		2nd Ghogari Cross Lane ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Hargovind's Kandori		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
C		Kalbadevi Road		...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2
		Kika Street		1	...	...	...	5	...	...	...	...	...	...	...	...	...	...	6
		Masjid Street		...	...	...	...	4	...	3	...	...	...	...	...	...	...	...	7
		Maruty Lane		...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	3
		Masjid Cross Lane		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Malharrao Wadi		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Nizam Street		...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	3
		Panchayet Wadi		...	1	...	...	3	...	...	...	...	...	...	...	...	...	...	4
		Panjrapole Street		1	1	...	...	2	...	1	...	...	...	...	...	...	...	...	5

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1914—*continued.*

Locality.				Population by Census of 1911.	Races.														
Ward.	Section.	Street.			Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Unknown.	Total.
		Bhuleshwar—*contd.*																		
C	Bhuleshwar.	1st Panjrapole Lane	...	36,459	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		2nd Panjrapole Lane	...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		1st Pophalwadi	...		...	3	...	...	1	...	...	...	...	...	...	...	...	...	...	4
		2nd Pophalwadi	...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		3rd Pophalwadi	...		...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
		Khara Talao.																		
C	Khara Talao.	Bhendi Bazar Parel Road	...	22,979	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	3
		Chimna Butcher Street	...		...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	3
		1st Cooper Street	...		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		2nd Cooper Street	...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Duncan Road	...		...	1	...	...	1	7	1	...	...	...	...	...	...	...	...	10
		Doctor Street	...		...	...	...	...	...	3	3	...	...	...	...	...	...	...	...	6
		Dhabu Street	...		...	...	...	...	...	2	3	...	...	...	...	...	...	...	...	5
		Dharamsey Street	...		...	...	...	...	...	2	3	...	...	...	...	...	...	...	...	5
		Dharamsey Cross Lane	...		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Erskine Road	...		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Gujar Street	...		...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	4
		Khoja Street	...		...	...	...	...	1	11	1	...	...	...	...	...	...	...	...	[illegible]
		Khara Talao Street	...		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	[illegible]
		Mutton Street	...		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Null Bazar	...		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		Pakmodia Street	...		...	...	...	...	...	1	3	...	...	...	...	...	...	...	...	4
		Kumbharwada.																		
C	Kumbharwada.	Bhandari Street	...	27,703	...	1	1	...	2	9	...	...	...	...	...	...	...	...	...	13
		Bhandari Cross Lane	...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		C. P. Tank Road	...		...	1	...	...	1	2	...	...	...	...	...	...	...	...	...	4
		1st Carpenter Street	...		...	1	...	...	...	3	...	...	...	...	...	...	...	...	...	4
		2nd Carpenter Street	...		...	...	...	...	1	3	...	...	...	...	...	...	...	...	...	4
		Duncan Road	...		1	...	...	...	...	3	...	...	...	...	...	...	...	...	...	4
		2nd Duncan Cross Lane	...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Durgadevi Street	...		...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	3
		Falkland Road	...		...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	5
		Girgaum Back Road	...		...	...	...	...	2	...	...	...	...	2	...	...	...	...	...	4
		Islampura Street	...		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Kumbharwada Street	...		...	...	...	...	...	16	1	...	...	...	...	...	...	...	...	17
		Khetwadi Main Road	...		...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		North Brook Street	...		...	...	...	...	...	9	...	...	...	...	...	...	...	...	...	9
		1st Pathan Street	...		...	...	...	...	...	8	...	...	...	...	...	...	...	...	...	8
		2nd Pathan Street	...		...	...	...	...	1	3	...	...	...	...	...	...	...	...	...	4
		Sindhi Lane	...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Khetwadi.																		
D	Khetwadi.	Falkland Road	...	31,987	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		2nd Falkland Cross Lane	...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		3rd Do. do.	...		...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	3
		4th Do. do.	...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		5th Do. do.	...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		6th Do. do.	...		...	...	...	...	...	4	1	...	...	1	...	...	...	...	...	6
		Girgaum Back Road	...		...	1	...	1	...	3	...	1	...	...	...	...	...	...	...	6
		Grant Road	...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Khetwadi Back Road	...		...	...	...	...	...	4	1	1	...	...	...	...	...	...	...	6
		2nd Khetwadi Lane	...		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		6th Do. do.	...		...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	4
		8th Do. do.	...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		10th Do. do.	...		...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
		Khetwadi Main Road	...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Lamington Road	...		...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	3
		1st Parsivada	...		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Powvala Road	...		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Post Office Lane	...		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Sandhurst Road	...		...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1914—*continued.*

Ward.	Section.	Street.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Unknown.	Total.
		Girgaum.																	
D	Girgaum.	Alalkote Lane	30,779	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	2
		Cow Lane		...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	3
		Girgaum Road		...	1	...	...	...	4	...	...	...	...	...	...	...	...	...	5
		Girgaum Back Road		...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	3
		Kandewadi Lane		...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
		Kelewadi Lane		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Mugbhat Lane		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		Mugbhat Cross Lane		...	1	...	...	...	3	...	...	...	...	...	...	...	...	...	4
		Sadashiv Street		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		Thakurdwar Road		...	2	...	1	...	1	...	...	...	...	...	...	...	...	...	4
		Chowpati.																	
D	Chowpati.	Banam Hall Lane	11,397	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	3
		Chaupati Road...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Damar Lane		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		French Bridge Road		...	1	...	...	1	2	...	...	...	...	...	...	...	...	...	4
		Gamdevi Road		...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	2
		Girgaon Road		...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	3
		Kennedy Bridge Road ...		...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	2
		Queen's Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Walkeshwar.																	
E	Walkeshwar.	Babulnath Road	10,640	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Banganga Temple Compound..		...	4	...	...	...	3	...	...	...	...	...	...	...	...	...	7
		Dadyshet Street		...	...	...	...	...	7	...	...	...	...	...	...	...	...	...	7
		Dongarsi Road...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Gibbs Road		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Gowalia Tank Road		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Hughe's Road		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		Nepean Sea Road		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		Walkeshwar Road		...	1	...	1	...	2	...	...	...	...	...	...	...	...	...	4
		Wilderness Road		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Mahalakshmi.																	
D	Mahalakshmi.	Altamont Road	26,302	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		Anesty Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Arthur Road		...	...	...	...	23	27	...	...	...	...	...	...	...	...	...	50
		Bellasis Road		...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	7
		Chikalwadi		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Clerk Road		...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	3
		Forjet Street		...	...	...	...	4	...	2	...	...	...	...	...	...	...	...	6
		Gowalia Tank Road		...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	2
		Pedder Road		...	...	...	...	5	...	...	...	...	1	...	...	...	...	...	6
		Sleater Road		1	...	...	...	9	...	...	...	...	1	...	...	...	...	...	11
		Tardeo Road		...	...	...	...	10	1	1	2	...	...	...	...	...	...	...	14
		Warden Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Mazagon.																	
E	Mazagon.	Belvedere Road	30,075	...	...	...	...	4	1	4	...	...	2	...	...	...	...	...	11
		Dockyard Road		...	...	...	...	8	2	2	...	...	2	...	...	...	...	...	14
		DeLima Street		1	...	...	...	2	1	...	...	...	2	...	...	...	...	...	6
		Gunpowder Road		...	...	...	...	5	...	...	...	...	1	...	...	...	...	...	6
		Ghorupdeo Road		1	...	...	...	17	...	1	...	...	...	...	...	...	...	...	19
		Hospital Lane		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Matarpakhadi Road		...	3	...	...	9	...	1	4	...	3	...	...	...	...	...	20
		Muzaverpakhadi Road ...		...	...	...	...	2	...	2	...	...	...	...	...	...	...	...	4
		Mazagon Road		1	1	...	...	6	1	...	...	...	...	...	...	...	...	...	9
		Magazine Road...		...	...	...	...	4	1	...	...	...	...	...	...	...	...	...	5
		Mount Road		...	...	...	...	22	...	...	...	...	...	...	...	...	...	...	22
		Reay Road		...	...	...	...	17	3	1	...	...	...	...	...	...	...	...	21
		Tank Bunder Road		...	...	...	...	11	1	...	...	...	...	...	...	...	...	...	12
		Victoria Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Wari Bunder Road		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3

35—*continued.*

Number of Plague Deaths by Streets and Races during 1914—*continued.*

	STREET.	Population by Census of 1911.	RACES. Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Unknown.	Total.
	Tarwadi.																	
E Tarwadi.	Albert Road	28,424	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
	Babula Tank Road		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
	Chinchpokli Road		...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
	Connaught Road		...	...	...	...	6	1	2	1	...	...	...	...	...	...	1	11
	Ghorupdeo Road		2	...	...	...	17	...	...	...	...	...	...	...	...	...	...	19
	Love Lane		...	...	...	...	9	...	...	...	...	5	...	1	...	...	...	15
	Mount Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
	Mazagon Road		1	...	...	...	8	1	...	...	...	1	...	...	...	...	...	11
	Nesbit Lane		...	...	...	...	6	4	4	...	...	1	...	...	...	...	...	15
	Parel Road		...	...	...	...	9	...	...	...	...	1	...	...	...	...	...	10
	Sussex Road		...	...	...	...	10	3	2	...	...	1	...	...	...	...	...	16
	Victoria Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
	2nd Nagpada.																	
E 2nd Nagpada.	Bellasis Road	21,700	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2
	Duncan Road		...	...	...	...	2	3	...	...	...	...	...	...	...	...	...	5
	Grant Road		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
	Huzeria Street		...	...	...	...	1	1	3	...	...	...	...	...	...	...	...	5
	Kazipura Street		...	...	...	...	...	6	1	...	...	...	...	...	...	...	...	7
	Mastan Tank Road		...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	4
	Parel Road		...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	2
	Sk. Budan Camruddin Street...		...	...	...	...	1	...	6	...	...	...	...	...	...	...	...	7
	Tank Street		...	...	...	...	...	3	5	...	...	...	...	...	...	...	...	8
	Undria Street		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
	Kamatipura.																	
E Kamathipura.	Bapty Road	36,751	...	...	...	...	5	1	...	...	...	...	...	...	...	...	...	6
	Bazar Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
	Duncan Road		...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	3
	Kamathipura Bazar Road ...		2	3	...	...	7	...	...	...	...	...	...	...	...	...	...	12
	" 1st Lane ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
	" 2nd do. ...		...	...	...	...	12	2	1	...	...	...	...	...	...	...	...	15
	" 3rd do. ...		...	...	...	...	9	1	...	...	...	...	...	...	...	...	...	10
	" 4th do. ...		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
	" 5th do. ...		...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	9
	" 6th do. ...		...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	9
	" 7th do. ...		...	...	...	...	6	1	...	...	...	...	...	...	...	...	...	7
	" 8th do. ...		...	...	...	...	4	4	...	...	...	...	...	...	...	...	...	8
	" 9th do. ...		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
	" 10th do. ...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
	" 12th do. ...		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
	" 13th do. ...		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
	" 14th do. ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
	Northbrook Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
	Stable Street		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
	Suklaji Street		1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Tardeo.																	
E Tardeo.	Arab Lane	27,758	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
	Balaram Street		...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2
	Bapty Road		...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	3
	Bellasis Road		...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
	Falkland Road...		1	...	...	...	2	...	1	...	...	...	...	...	...	...	...	4
	Foras Road		...	...	...	...	8	3	...	...	...	...	...	...	...	...	...	11
	Grant Road		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
	Jairajbhai Street		...	...	...	...	...	10	1	...	...	1	...	...	...	...	...	12
	Lamington Road		...	...	...	...	14	2	...	...	...	...	...	...	...	...	...	16
	Road Side		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
	Suklajee Street		...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	5

35—*concluded.*

TABLE showing the Number of Plague Deaths by Streets and Castes during

Locality.			Census	Castes.													
Ward.	Section.	Street.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Non-Asiatics.	
		Byculla.															
E	Byculla.	Agripada	75,348	...	...	...	...	13	2	7	...	...	...	...	...	...	...
		Arthur Road		...	...	...	...	18	3	1	...	1	...	...	...	...	...
		Bellasis Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...
		Chambhar Lane		...	...	...	...	...	...	1	...	...	...	...	...	...	...
		Clare Road		...	...	...	...	...	2	...	1	...	...	1	...	...	...
		Clerk Road		...	...	...	...	16	1	1	...	...	...	...	...	...	...
		DeLisle Road		4	1	...	...	51	5	1	...	...	1	1	...	...	...
		" Cross Lane ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...
		Gell Street		...	...	...	...	...	1	...	...	...	...	...	...	...	...
		Ghelabhoy Street		...	...	...	...	...	1	2	...	...	...	...	...	...	...
		Gujree Bazaar		...	...	...	...	1	4	...	...	...	...	...	...	...	...
		Haines Road		2	...	...	...	22	3	2	...	1	...	...	...	...	...
		Kalachowki Road		...	...	...	...	5	...	...	...	...	...	...	...	...	...
		" Cross Lane ...		...	...	...	...	2	...	...	...	...	...	...	...	...	...
		Kalapani		...	...	...	...	1	...	3	...	...	...	...	...	...	...
		Lamington Road		...	...	...	...	12	1	...	...	...	...	...	...	...	...
		Mahomedan Street		...	...	...	...	...	3	3	...	...	...	...	...	...	...
		Morland Road		...	1	...	...	8	8	2	...	...	1	...	...	...	...
		Parel Road		6	...	...	...	9	...	1	...	...	...	1	...	...	...
		Ripon Road		2	...	...	...	8	5	10	...	1	1	...	1	...	...
		Sankli Street		...	...	...	...	...	...	2	...	...	1	...	...	...	...
		Sunder Lane		...	...	...	...	1	...	1	...	...	...	...	...	...	...
		Tankpakhadi		...	...	...	...	2	...	...	...	...	...	...	...	...	...
		1st Nagpada.															
E	1st Nagpada.	Bellasis Road	6,414	...	...	...	...	...	1	...	...	...	1	...	...	...	...
		New Nagpada Road		...	1	...	...	2	1	...	...	...	...	...	...	...	...
		Parel Road		...	...	...	...	4	...	...	...	...	...	...	...	...	...
		2nd Peerkhan Street		...	1	...	...	1	...	...	...	...	...	...	...	...	...
		3rd " "		...	...	...	...	1	...	...	...	...	...	...	...	...	...
		Parel.															
F	Parel.	Arthur Road	45,474	...	...	...	...	20	2	...	...	...	...	...	...	...	...
		Bhoiwadi Road		...	1	...	...	1	...	...	...	...	...	...	...	...	...
		Bhoiwadi Cross Road		...	...	...	...	4	...	...	...	...	...	...	...	...	...
		Currey Road		...	1	...	...	12	...	1	...	...	...	...	...	...	...
		Elphinstone Road		...	1	...	...	2	4	...	...	...	1	...	...	...	...
		Government Gate Road ...		...	...	...	...	12	1	1	1	...	1	...	...	...	...
		Kalachowky Road		...	...	...	...	5	...	...	...	...	...	...	...	...	...
		Lalwady		...	...	...	...	4	7	...	...	...	...	...	...	...	...
		Parel Road		...	...	...	...	3	...	2	...	...	...	...	...	...	...
		Parel Back Road		...	...	...	...	5	...	...	...	...	...	...	...	...	...
		Parel Tank Road		2	...	...	...	6	...	1	...	...	...	...	...	...	...
		Parel Village		...	4	...	...	15	1	1	...	...	...	...	...	...	...
		Peroo's Chawl		...	...	...	...	8	...	1	...	...	...	...	...	...	...
		Suparibang Road		2	...	...	...	25	1	...	...	...	...	...	...	...	...
		Tulshirampada		...	...	...	...	1	...	...	...	...	...	...	...	...	...
		Sewri.															
F	Sewri.	Bhoiwadi Road	19,067	...	...	...	...	6	...	2	...	...	4	...	...	...	...
		Golangi Hill Road		...	...	...	...	3	...	...	...	...	...	...	...	...	...
		Parel Tank Road		...	2	...	...	34	...	1	...	...	...	...	...	...	...
		Sewri Agriwada		...	...	...	...	11	...	1	...	...	...	...	...	...	...
		Sewri Cemetery Road... ...		...	...	...	...	...	1	...	...	...	...	...	...	...	...
		Sewri Cross Road		...	...	...	...	11	2	3	...	...	...	...	...	...	...
		Sewri Jackeria Bunder ...		1	...	...	...	7	...	3	...	...	1	...	...	...	...
		Sewri Koliwada...		...	...	...	...	12	...	4	...	...	1	...	...	...	...
		Sewri New Road ...		...	...	...	...	7	...	...	...	...	...	...	...	...	...
		Sewri Road		...	...	...	...	13	1	...	...	...	...	...	...	...	...

35—*concluded.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1914—*concluded.*

Locality.				Races.															
Ward.	Section.	Streets.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro Africans.	Buddhists.	Unknown.	Total
		Sion.																	
	Sion.	Bhoiwadi Road	30,680	...	...	...	...	18	19	...	...	...	3	...	...	...	...	...	40
		Bhoiwadi Cross Road		...	2	...	...	10	1	...	...	...	...	...	...	...	...	...	13
		Dadar Road		1	...	...	...	6	17	5	...	...	...	...	...	...	...	...	29
		Dhakti Sewri		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Elphinstone Road		2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	3
		Govari Village		...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	2
		Matunga Bhandarwada ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Matunga Road		1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Matunga Station		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Naigaon Road		1	...	...	...	12	...	...	...	...	...	...	...	...	...	...	13
		Naigaon Cross Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Sewri Cross Road		...	...	...	...	3	...	7	...	...	...	...	...	...	...	...	10
		Sion Agriwada		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
		Sion Dharavi Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Vincent Road		...	1	...	...	3	...	...	...	...	...	...	...	...	...	...	4
		Wadala Gaon		...	...	...	...	9	1	...	...	...	4	...	...	...	...	...	14
		Mahim.																	
	Mahim.	Bazar Road	30,492	...	...	...	...	10	...	2	...	...	...	...	...	...	...	...	12
		Causeway		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Dadar Portugese Church Galli.		...	2	...	...	...	...	1	...	...	...	...	...	...	...	...	3
		Dadar Road		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Dharavi Koliwada		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Dharavi Road		...	2	...	...	3	16	2	...	...	...	...	...	...	...	...	23
		Kapad Bazar		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Lady Jamshedjee Road ...		...	5	...	...	48	...	1	...	...	...	...	...	...	...	...	56
		Lohar Chall		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Mangelwadi		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Mori Road		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		New Matunga Road		...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	10
		Old Parbhadevi Road		...	...	...	...	6	...	...	...	...	1	...	...	1	...	...	8
		Sorab Galli		...	1	...	...	8	1	...	...	...	...	...	...	...	...	...	10
		Worli.																	
	Worli.	Arthur Road	89,611	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Carroll Road		...	...	...	...	2	11	...	1	...	...	...	...	...	...	...	14
		Clerk Road		...	...	...	...	1	3	...	...	...	...	...	...	...	...	...	4
		Cuffe Road		...	...	...	...	13	...	...	...	...	1	...	...	...	...	...	14
		Dadar Galli		...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2
		Dadar Kumbharwada... ...		...	1	...	...	17	...	1	...	...	1	...	...	...	...	...	20
		Dadar Road		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
		Delisle Road		...	1	...	...	49	14	2	1	...	1	...	...	...	...	...	68
		Dhan Mill, Kumbharwada ...		...	2	...	...	12	7	...	...	...	...	...	...	...	...	...	21
		Dhobiwada Road		...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	2
		Elphinstone Road		...	...	...	...	9	22	3	...	...	...	...	...	...	...	...	34
		Fergusson Road		...	...	...	...	38	4	2	...	...	...	...	...	...	...	...	44
		Haines Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Khed Tank Galli		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Koliwada (Worli)		...	...	...	...	4	...	...	...	...	2	...	...	...	...	...	6
		Middle Palgadi		...	...	...	...	8	...	...	...	...	1	...	...	...	...	...	9
		Naya Pada		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		New Parbhadevi Road ...		...	...	...	...	23	1	2	...	...	1	...	...	...	...	...	27
		Old Parbhadevi Road		...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	6
		Harbour, Docks, Railways and Homeless.																	
	Harbour.	Harbour, Docks, Railways and Homeless	44,979	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	2

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